FIRE ENGINEERING

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The Journal of the Fire Protection Profession Since 1877

APRIL, 1954

First General Alarm in City's History Sounded for Fire in 10-Story Warehouse at Buffalo, N. Y. (See page 308)

A CASE - SHEPPERD - MANN PUBLICATION

is Your Community protected

by the MOST EFFECTIVE resuscitating apparatus known to Science?

EMERSON Resuscitators

SIMPLE to operate, with no complicated adjustments.

SAFE for adults, children, or infants. There is no record of lung injury from the pressures used in thousands of cases in more than ten years.

EFFECTIVE The suction phase, alternating with the positive phase, helps circulation and can be of life-and-death importance, especially to victims in shock.

ACCEPTED by the American Medical Association for use by laymen (A.M.A. Journal, May 30, 1942). Relied on from coast to coast by thousands of leading hospitals and fire departments.

Write for our free

Medical Reference on Resuscitation

Information and Demonstration

Bulletin on a New Manual Method of Artificial Respiration

"Simplest and Safest"

J. H. EMERSON COMPANY

32 COTTAGE PARK AVENUE, CAMBRIDGE 40, MASSACHUSETTS

America is fortunate in having a large number of fine fire-truck manufacturers—yet, in one way *this* particular truck is outstanding.

FEDERAL

750 g.p.m. Class A triple combination pumper built by the Young Fire Equipment Corp., of Buffalo New York. Equipped with a Hale 2-stage pump, 400 gallon booster tank, GMC chassis. FEDERAL Beacon Ray light on cab roof, and FEDERAL 'Q' siren on the fender.

makes the difference!

Equipped with FEDERAL warning signals this truck carries its *own* protection, built-in. When racing to the scene of an emergency, fire apparatus must be equipped with the best method of alerting cross traffic and warning others of the approach of fast moving emergency equipment. FEDERAL does this job superbly, both visibly and audibly.

The loud roar of the Q siren penetrating high-level traffic noises and the eye-arresting flash of the famous Beacon Ray's twin beams alert traffic from *all* 360 degrees of the compass. Federal's famous Beacon Ray light and powerful Q siren combine to make this piece of fire apparatus the best protected pumper in America!

Specify **FEDERAL and you'll discover the difference**

FEDERAL SIGN and SIGNAL CORPORATION

FORMERLY: FEDERAL ENTERPRISES, INC.

8702 S. STATE ST. CHICAGO 19, ILLINOIS

FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

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MEMBER

Audit Bureau of Circulations
Associated Business Publications

The Job!

HAS it ever occurred to you who are in, or kindred, to the business of suppressing fire, to be glad of your calling?

● Has it ever occurred to you how vitally necessary that calling is—as compared with—let us say, the more prosaic, if somewhat safer job of clerk, bookkeeper or the like?

● Has it ever occurred to you that only you, and your co-workers in the field, stand between your fellow human beings and death and destruction by fire?—That, without your "blood, toil and sweat" the billion dollars and more annual fire losses (not to speak of the 12,000 deaths) by consuming fire, would be many, many times as tragic!

● Sometimes when we get a bit down—editorially speaking, as folks must who live the swift-paced life of the fire service, we're inclined to hunger for one of those less spectacular and more cushy jobs—and then we say to ourselves, *be glad of our lot!—Be glad we can contribute our share to this never-ending, strenuous, soul-stirring battle with fire—and keep going!*

● We who publish FIRE ENGINEERING don't kid ourselves that we are indispensable, or that we can take the place of those doughty smoke-eaters on the fireline. But we're mighty glad just the same that we can contribute to the good cause, and that when we're gone, some other enthusiasts will carry on in our footsteps, liking their jobs above everything else!

The Publishers

FIRE ENGINEERING

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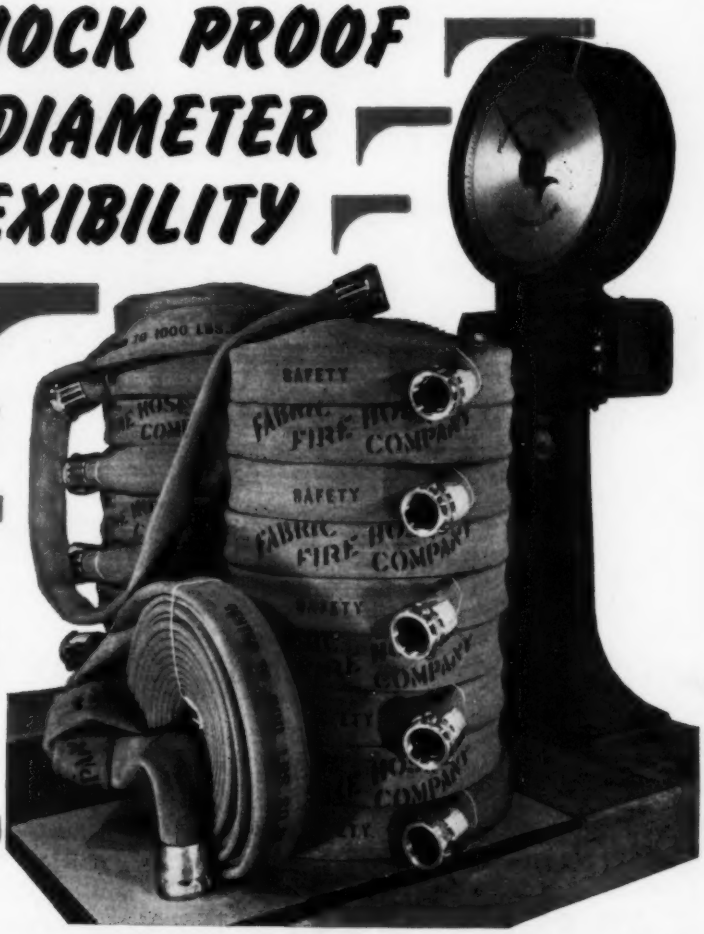
A CASE-SHEPPERD-MANN PUBLICATION
"*Specialized* Leadership"

FABRILON

DOUBLE SURFACE JACKETS
PRESSURE SHOCK PROOF
SMALL COIL DIAMETER
SUPREME FLEXIBILITY



STRENGTH
LIGHTWEIGHT
MG
BLOW PROOF
COUPLINGS
10% LESS
FRICTION LOSS PER SECTION

Here is 1000 feet of 2½" FABRILON hose of assorted types, ready for shipment. This is a fire hose in which every ounce of extremely high grade materials is combined by skillful design so as to give great strength per pound of materials used. It is so flexible you can tie it in a knot, yet so strong a terrific pressure shock will not burst it. In practical fire fighting, FABRILON means *no more pressure breaks, no more ruptured hose, no more blown couplings,* absolutely *safe* hose lines.

FABRIC FIRE HOSE COMPANY

THE ONLY EXCLUSIVE MANUFACTURER OF FIRE HOSE IN AMERICA

SANDY HOOK CONNECTICUT

IN CANADA BICKLE-SEAGRAVE, LTD. WOODSTOCK, ONTARIO

JOHN BEAN
adds a new dimension to firefighting

the new combined true high-pressure fog and volume fire-fighter

Fast-striking high-pressure fog backed up by slugging volume power now makes it possible for you to fight fires as never before. Bean engineers add this greater dimension to firefighting techniques with their new combination high-pressure fog and volume fire-fighter. It boasts the biggest firefighting wallop ever packed into one unit. Two famous Bean pumps (operating simultaneously or separately) offer you the chance to attack the fire with 2 high-pressure and 4 volume lines. A 500-gallon tank allows you to start pumping seconds after you arrive at the scene. You can get in fast and keep slugging for a "quick kill."

Besides this new approach to firefighting methods, Bean engineers have fashioned a streamlined, sleek-looking truck with a low center of gravity for safe riding at high speeds. 5 full-size compartments furnish more than 45 cubic feet of storage space for supplementary equipment. A rear fill hopper with an easily removable strainer makes filling a simple operation. For fighting grass, prairie, or other running fires, both high-pressure lines can be used while the truck is in motion.

OUR BEST SALES TALKS COME FROM THE CHIEFS WHO USE BEAN FIRE-FIGHTERS

Write these men for their opinion of the unit.

Fire Chief Eugene Davidson—Bedford, Penn.

Fire Chief R. L. Henry—Annandale, Virginia

JOHN fmc BEAN

TWO-FISTED FIRE-FIGHTERS

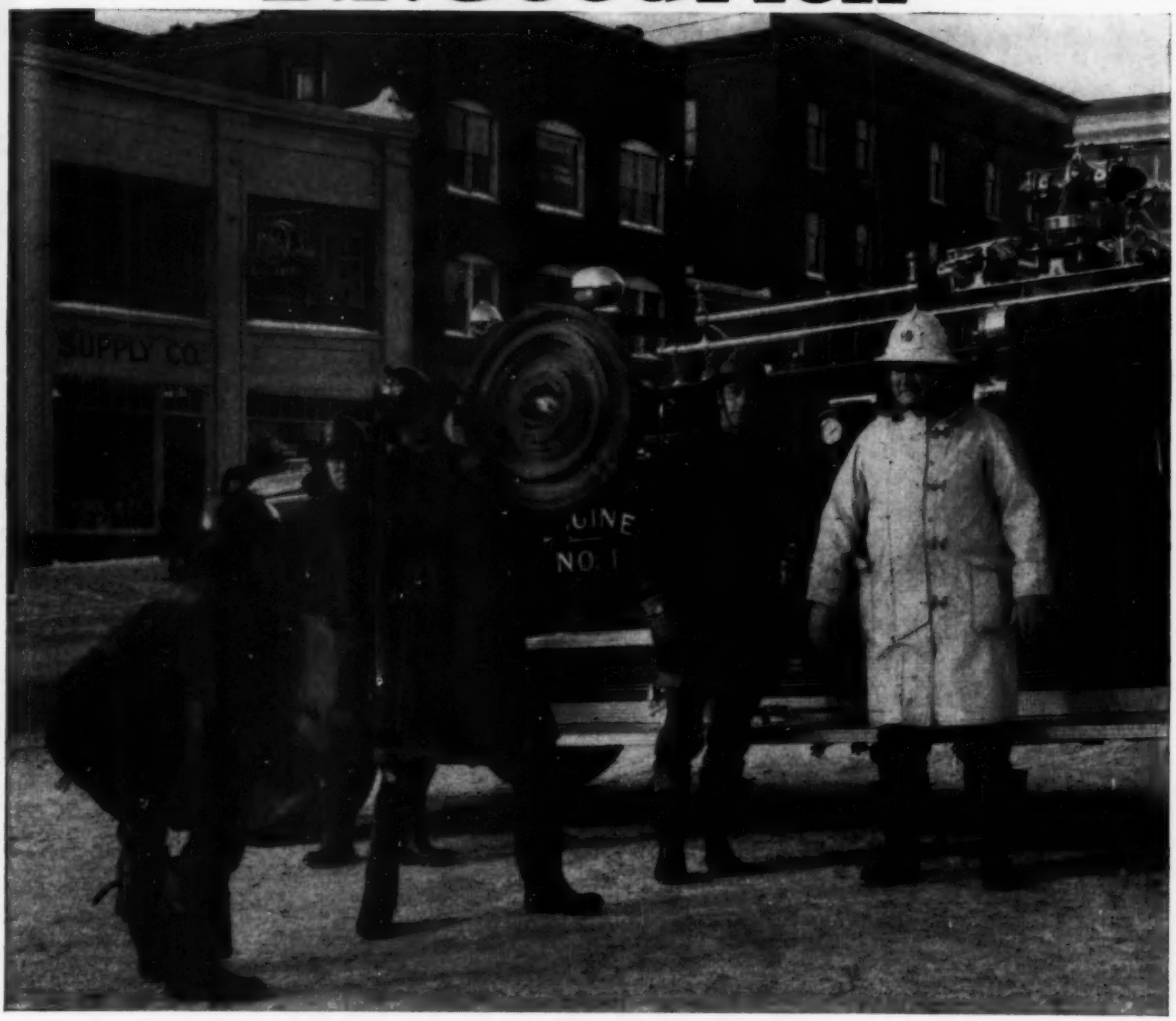
Can be mounted on most standard truck chassis

John Bean Division
Dept. 126
Lansing 4, Michigan

John Bean Division
P.O. Box 145
San Jose, California

A PRODUCT OF FOOD MACHINERY AND CHEMICAL CORPORATION

RESEARCH KEEPS **B.F.Goodrich** FIRST IN RUBBER



18% lighter B. F. Goodrich hose wins lifting test

A LIGHT hose is much more than a convenience. It means faster handling when speed is all important in checking a blaze.

Not only does Fire King save precious minutes out on an alarm, but it also racks naturally without twisting or kinking. This easy "rackability" saves time back at the station.

B. F. Goodrich Fire King is 18% lighter, much more flexible than other hose—thanks to a chemically-produced fiber. This fiber is used as "filler" cords that go *around* the hose and carry the load under pressure.

With all its lightness and ease of handling, actual service tests prove that B. F. Goodrich Fire King, tested to 600 pounds pressure, is 50% stronger than standard hose, tested at only 400 pounds pressure.

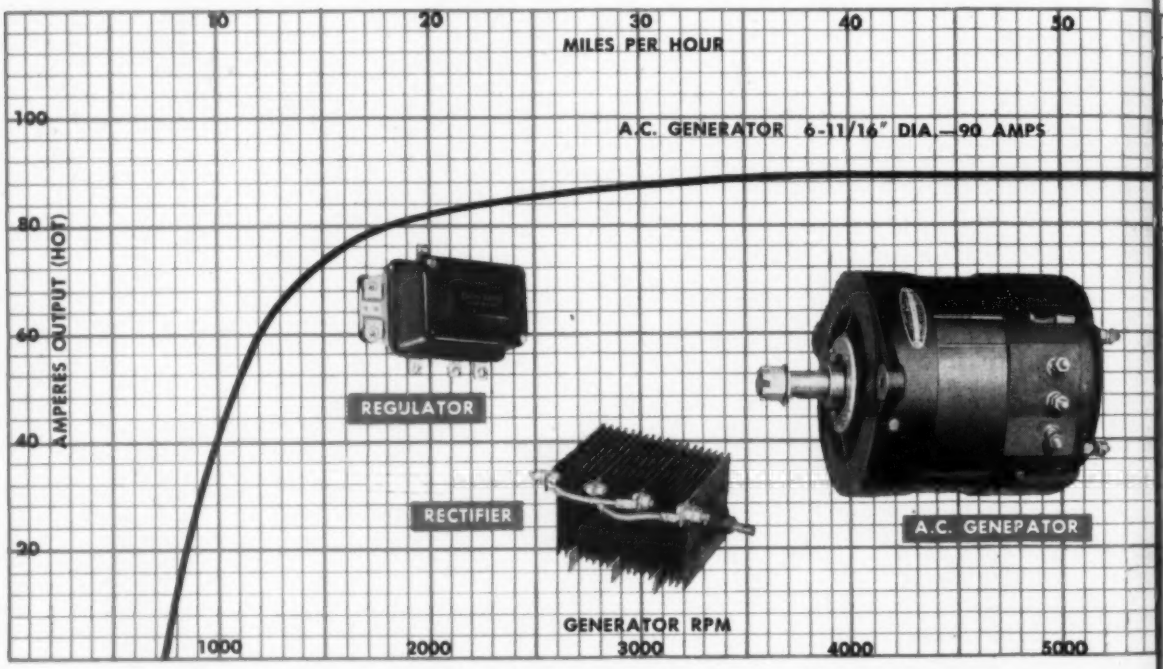
The picture above shows the outcome of a lifting test at Burlington, Vermont. The fireman lifting the 50-foot coil of Fire King (at the right) has the hose on his shoulder while the other man is still straining to lift the 50-foot length of ordinary hose. Chief Duball says his men like the lightness of Fire King and the fact that it's the easiest hose to handle and coil they've ever had.

Next time you're in the market for hose, ask your B. F. Goodrich Fire Hose Distributor for a sample of Fire King and compare it with your present hose —for weight, flexibility and "rackability". You'll be convinced it is your best hose buy. *The B. F. Goodrich Company, Dept. M-230, Akron 18, Ohio.*

B.F.Goodrich
INDUSTRIAL PRODUCTS DIVISION

Power Packed and

HERE'S THE A.C. ANSWER TO EXTRA-HEAVY ELECTRICAL DEMANDS



DELCO-REMY

A. C. Generator, Regulator and Rectifier

Here's the answer for "problem" vehicles—Delco-Remy's new long-lived A.C.-D.C. charging system! It's specifically designed to meet the *extra*-heavy electrical demands of fire engines, police prowl cars, big city taxis—other vehicles equipped with two-way radio, floodlights or any extra electrical units. Ample current reserve picks up discharged battery quickly in operation. Delco-Remy A.C. generators are suitable for use at all engine speeds.

With output ranging from 30-40 amperes at curb idle and up to 90 amperes at higher engine speeds, the new Delco-Remy A.C.-D.C. charging system meets all electrical needs under the toughest operating conditions. Included in the new system is the A.C. generator, a matching regulator, and a rugged, dependable dry-plate rectifier which converts generator A.C. output to direct current.

Application packages complete with installation instruction sheets for popular makes of cars and trucks are now available. The conversion job is simple. For further details and application data, see your nearest United Motors distributor.

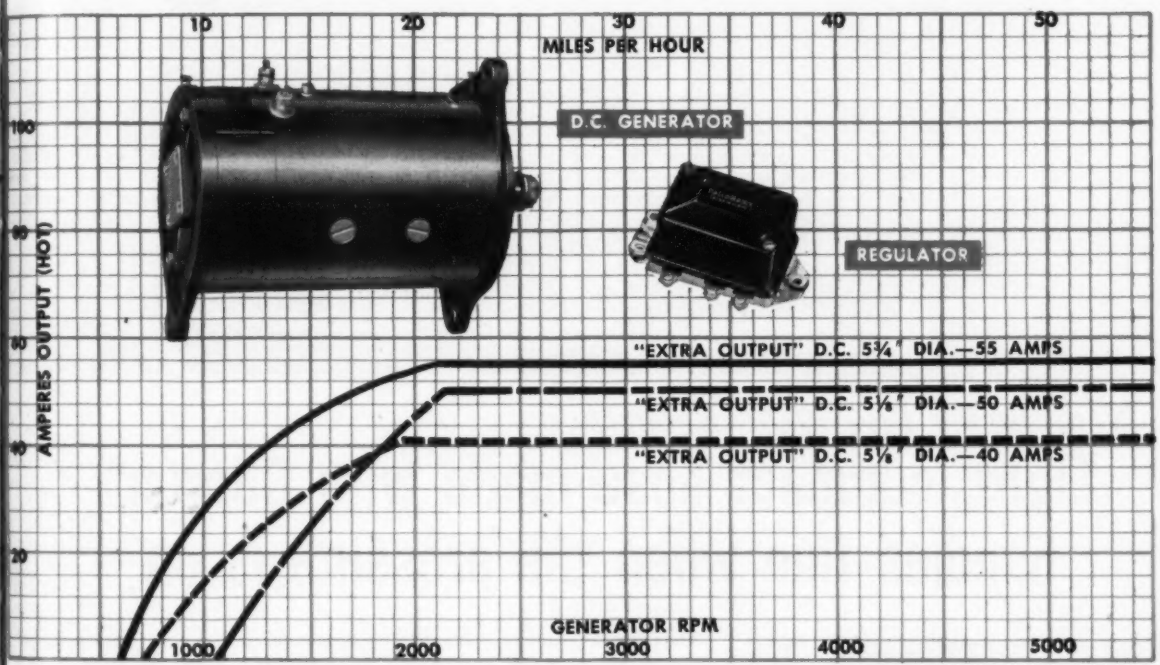
A GENERAL MOTORS PRODUCT — A UNITED MOTORS LINE

DISTRIBUTED BY WHOLESALERS EVERYWHERE

WHEREVER WHEELS TURN OR PROPELLERS SPIN

Right for the Job

HERE'S THE D.C. ANSWER TO HEAVY ELECTRICAL DEMANDS



DELCO-REMY

Extra-Output D. C. Generators and Matching Regulators

Delco-Remy extra-output D.C. generators are an economical answer to the electrical needs of fire engines, suburban police cars, rural mail cars . . . other vehicles with additional lights, two-way radios, or other special electrical equipment in medium to heavy-duty service. Delco-Remy extra-output D.C. generators are low in cost, simple to install, economical to maintain.

DELCO-REMY 40-AMP GENERATOR has low cut-in, about 7 mph, charges from 11 to 17 amperes at curb idle . . . full output about 18 mph —for vehicles customarily used in heavy traffic.

DELCO-REMY 50-AMP GENERATOR has slightly higher cut-in, about 11 mph . . . full output about 21 mph—for vehicles customarily operated at higher speeds, with minimum slow driving.

DELCO-REMY 55-AMP GENERATOR has very low cut-in, about 6 mph; charges at curb idle from 20 to 30 amperes . . . attains full output at 20 to 25 mph—for vehicles customarily operated at low speeds with added electrical loads, such as city taxicabs and police cars.

For further details and application data, see your nearest United Motors distributor.

Delco-Remy

DIVISION, GENERAL MOTORS CORPORATION, ANDERSON, INDIANA

WHEREVER WHEELS TURN OR PROPELLERS SPIN

New Jersey Fire Dept. Reports:

Light, compact hose made with Dacron* handles fine when the pressure is on

Note compactness of hose made of "Dacron" (*on left*) as compared with conventional hose (*on right*).

"The real test of any hose is how it handles under pressure, and here's where hose made with 'Dacron' is certainly outstanding," states Chief Alfred W. Wells of the Independence Fire Company No. 1, Palmyra, N. J. "And that's not all—we've used hose made with 'Dacron' for a year and a half and find it stows more compactly and is simpler to rack, too."

"Dacron" polyester fiber is the load-carrying "filling" cord that reinforces the hose. This man-made fiber is light, but extremely strong . . . makes possible a hose with less bulk, yet stronger and more flexible than conventional hose of the same diameter. And, the exceptional water resistance of "Dacron" helps protect against mildew . . . gives longer life to hose.

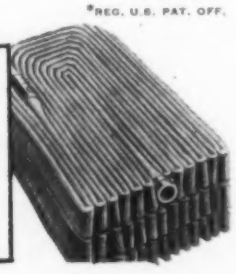
Hose made with "Dacron" has been field-tested for two years under every possible condition, and has clearly proved its superiority. Du Pont makes only the "Dacron" fiber . . . does not manufacture hose. Fire hose made with "Dacron" is produced by a number of leading fire-hose manufacturers. Order it from your supplier next time you need hose. E. I. du Pont de Nemours & Co. (Inc.), Textile Fibers Department, Wilmington 98, Delaware.

*REG. U.S. PAT. OFF.

CHEMICAL PROGRESS WEEK—MAY 17-22

ADVANTAGES OF FIRE HOSE MADE WITH "DACRON":

- Lighter
- Stronger
- More flexible
- Cuts loading time
- Saves space



DACRON

POLYESTER FIBER

DU PONT

REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

MANY INDIAN FIRE PUMPS

ARE STILL IN SERVICE AFTER 20 YEARS . . .

We know it to be a fact that hundreds of INDIAN FIRE PUMPS bought in the thirties are yet in use. For example, Chief Charles Hawley of Maple Springs, N. Y., Fire Dept. says:

"Despite rough handling and bumping around, the INDIANS we got way back in 1933 are still on the job. They were bought by my father, former Chief Everett Hawley."

What could speak more for the sturdy construction of these famous back-pack fire fighter? Designed right and built right, INDIAN FIRE PUMPS will last for years with little or no maintenance.

All seams electric welded—no leakage.

Send for latest INDIAN FIRE PUMP catalog.

"GIVING GREAT SATISFACTION"

Chief H. B. Wells,
Newbury, S. C.

"Over a year ago, we discarded soda acid type extinguishers and equipped with INDIAN FIRE PUMPS, which give great satisfaction with only clear water. We use INDIANS on roof fires and building fires that look impossible for a small pump to handle, but they have always held the fire until a line could be laid and in most cases, have the fire out before the line is laid. Our new truck came equipped with INDIAN FIRE PUMPS instead of the usual chemical extinguishers. We cannot praise the INDIAN too highly."

Fairview, N. Y. Fire Truck equipped with brass INDIAN FIRE PUMPS. Built by Oren Roanoke Corp., Roanoke, Va.

D. B. SMITH & CO.

406 MAIN ST. UTICA 2, N. Y.

"Choice for quality the world over"

PACIFIC COAST BRANCHES:

Hercules Equipment & Rubber Company, Inc.
425 Brannan Street
San Francisco 7, California

Fred E. Barnett Company
2006 S. E. 8th Ave.
Portland, Oregon

Hill & Hise Supply, Inc.
2700 Fourth Avenue South
Seattle, Washington

Roy G. Davis Company
1535 So. Flower Street
Los Angeles 15, California

Fred E. Barnett Company
600 Spring Street
Klamath Falls, Oregon

L. M. Curtis & Sons
426 West Third Street South
Salt Lake City, Utah

CANADIAN AGENTS:

Fleck Bros. Limited
110 Alexander Street
Vancouver, B. C., Canada

C. E. Hickey & Sons, Ltd.
Hamilton, Canada

1953 RECORD OF PERFORMANCE

Figures for the Past Year Furnish Proof of Continued ADT Protection Efficiency

The accompanying statistical analysis of ADT performance during 1953 and for the past ten years furnishes impressive evidence of the efficacy of ADT Central Station Protection Services in establishing a high degree of immunity from fire and burglary losses.

It is essential to consider that this record represents only the protection of *tangible* assets. An important corollary is the value of ADT Services in safeguarding the *intangible* assets of our subscribers—customers, good will, services of skilled employees, valuable records and other items necessary to preserve the earning power of a going business.

Performance of this type can be obtained only through continuous supervision and proper maintenance of protective signaling systems as supplied by ADT Central Station Services. May we tell you how ADT Services can give you better protection at lower cost by safeguarding your property *automatically*.

Call our Commercial Department if we are listed in your phone book; or write to our Executive Offices.

SPRINKLER SUPERVISORY AND WATERFLOW ALARM SERVICE

Supervisory alarms, indicating temporary impairment of sprinkler systems	189,268
Waterflow alarms, caused by fires or serious leaks	2,708
Manual fire alarms	157
Reported values of properties protected	$13,088,723,000
Ratio of losses to values protected	2/100th of 1%
Fire loss immunity in 1953	$99\frac{98}{100}\%$
AVERAGE FIRE LOSS IMMUNITY DURING THE PAST TEN YEARS	$99\frac{97}{100}\%$

WATCHMAN'S REPORTING AND MANUAL FIRE ALARM SERVICE

Investigations of failures of watchmen to signal Central Station on schedule	228,584
Total number of signals recorded	325,178,392
Watchmen's patrol efficiency	99 93/100th%
Alarms from Manual Fire Alarm Boxes	1,362
Reported values of properties protected	$18,907,278,000
Ratio of losses to values protected	2/100ths of 1%
Fire loss immunity in 1953	$99\frac{98}{100}\%$
AVERAGE FIRE LOSS IMMUNITY DURING THE PAST TEN YEARS	$99\frac{96}{100}\%$

BURGLAR AND HOLDUP ALARM SERVICES

Attacks on ADT Protection	2,184
Entrances effected	1,259
Captures as result of burglar, holdup and other emergency alarms	830
Reported values of properties protected	$3,919,077,000*
Ratio of losses to values protected	1/100th of 1%
Burglary loss immunity in 1953	$99\frac{99}{100}\%$
AVERAGE BURGLARY LOSS IMMUNITY DURING THE PAST TEN YEARS	$99\frac{99}{100}\%$

*Not including ADT-protected values in bank vaults, the U.S. Treasury, Federal Reserve Banks and branches, the U.S. Mints and the U.S. Bullion Depositories at Fort Knox, Ky., and West Point, N. Y.

ADT

Controlled Companies of
AMERICAN DISTRICT TELEGRAPH COMPANY
A NATIONWIDE ORGANIZATION
Executive Offices
155 SIXTH AVENUE • NEW YORK 13 • N. Y.

NEW [redacted] light-weight generator with [redacted] power

THIS NEW WINCO PLANT WEIGHS ONLY 148 LBS!

It is easily carried to wherever power is needed, and you can get full continuous power and top voltage regulation—*more power per pound.*

Two models available to meet your carryable power requirements. Model F-2500 DC and Model F-3000 AC. Choose either a Wisconsin AKN or Briggs & Stratton #14—both standard engines . . . parts stocks and fast service readily available.

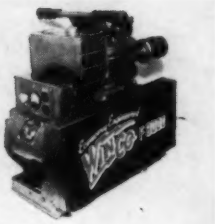
New lightweight, new full power, plus Winco's job-proven "Economy Engineering" add up to the ideal carryable generator for lights and power tools.

F-2500 DC

2500 watts starting capacity and continuous output*—16.8 watts per pound with Wisconsin AKN.
2000 watts continuous output* —13.5 watts per pound with Briggs & Stratton #14. Compound winding for full, SUPERCHARGED power when you need it.

F-3000 AC

2000 watts continuous output*, bonus motor starting capacity of 3000 watts*, 115V single phase, 60 cycle—13.5 watts per pound! Provides power for a greater number of tools. Serves as emergency stand-by power, too.

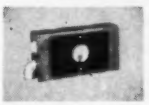


*Ratings determined at sea level and 60° F. ambient temperature. Write Wincharger for ratings at higher temperatures and/or altitudes.

Get all these Winco advantages

Superior Belted Construction. Permits engine to operate at manufacturer's recommended speed . . . assures smooth operation. Belt adjusted in seconds.

Easily Serviced. Since engine and generator are independent, either one can be removed for service without dismantling the other.



Multiple Use Control Panel. Four 115V, two-wire, twistlock receptacles . . . use four separate tools.

Lubricated for life. Grease-sealed ball bearings eliminate the need of lubricating the generator.

Easy-to-start 4-cycle engines. Proved, dependable performance. Every engine performance tested.

USE WINCO'S NEW CARRYABLE SUPERCHARGED ELECTRIC POWER FOR THESE AND MANY OTHER USES.

WINCO®

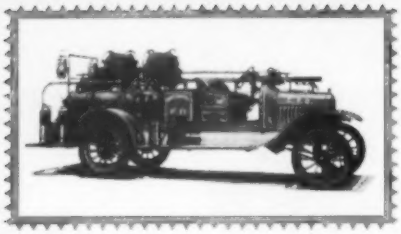
SEND THIS COUPON to Wincharger Corp., Sioux City, Iowa.

Send me complete information on Winco's new lightweight carryable generators.

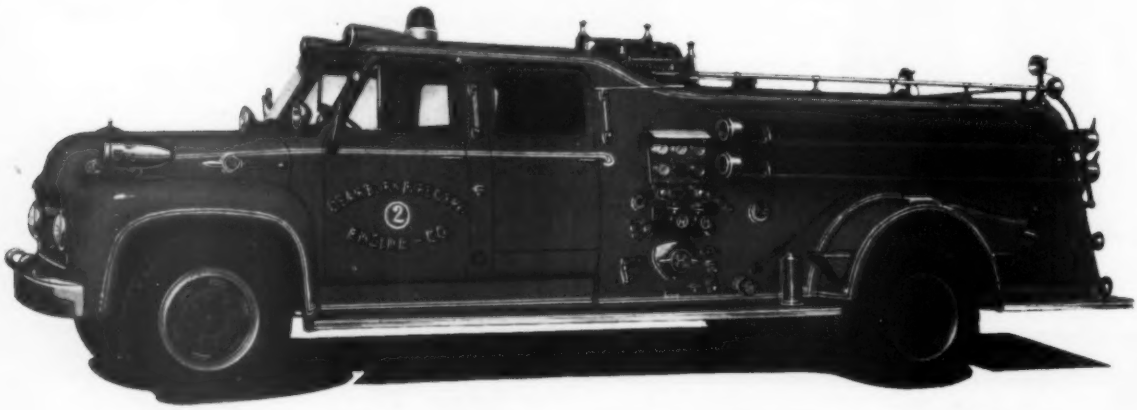
Name_____

Address_____

City_____ State_____



THEN and now it's HOWE



Finest in fire-fighting apparatus for four generations

THERE have been some changes made! Compare the pioneer HOWE "fire wagon" on Model T chassis to the modern Howe Combination Pumper, built on a Ford F-800 BIG JOB chassis . . . But be assured the pioneer truck was the most up-to-date of its day, saved man power, cut fire losses. As has every piece of Howe Fire Apparatus produced since the company's founding in 1872, four generations ago in the Howe family . . . Like Ford, *Howe pumpers are still built by Howe men*, active in production, management, design, directing able executives and experienced craftsmen who help maintain Howe leadership . . . Although a motorized pumper was not offered until 1908, experiments began in the Howe factory in 1904, fifty years ago. Even before that, gasoline motors were utilized by Howe to operate piston and rotary type pumps in horse-drawn apparatus . . . HOWE has always been in the lead in experimenting with the new, proving its worth, and then producing it. That is why you can depend upon HOWE Fire Apparatus to be the best obtainable . . . That is why progressive fire departments like Dearborn's look to HOWE for the finest in modern fire-fighting apparatus.

HOWE

HOWE

MEMBER FAM
(Fire Apparatus Manufacturers Association)

"dependable fire apparatus since 1872"

FIRE APPARATUS COMPANY

Dept. FE4, 1400 W. 22nd St., Anderson, Ind., U. S. A.

Four new HOWE Combination Pumpers recently delivered to the City of Dearborn, Mich.

NEW

15-WATT {6/12 VOLT / 25-50 MC} 2-WAY RADIO

MC 2
Receiver-Transmitter ES-22

- ✓ **Compact, *single-package* design for installation convenience!**
- ✓ **Versatile 6/12 volt operation!**
- ✓ **Low Transmit and standby battery drain!**
- ✓ **Delivers the most for your communication dollar!**
- ✓ **Optional front mount control unit available!**
- ✓ **Converts quickly . . . inexpensively to narrow band use!**
- ✓ **The exact sensitivity . . . selectivity you need!**

ONCE AGAIN General Electric meets your exact communication equipment requirements! The evident waste in using more powerful 30 or 60 watt units where they are not needed is banished by this latest G-E receiver-transmitter design. It incorporates all the operating and convenience features you prefer. Here is the true economy set that rounds out your General Electric communication system . . . famous nation-wide for finest performance . . . lowest maintenance costs!

YOUR CAS* MAN will demonstrate this mobile unit . . . supply you with complete information on its uses. Call him today at our local General Electric office or mail the coupon at right.

**Communications Advisory Service*

GENERAL ELECTRIC

General Electric Company, Section 5944
Electronics Park, Syracuse, N. Y.

Please send me complete details of this new 15-Watt Low Band Communication Equipment.

NAME.....

COMPANY.....TITLE.....

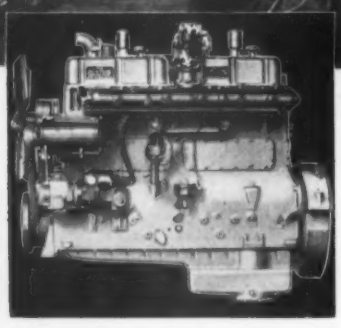
ADDRESS.....

CITY.....STATE.....

CHICAGO GETS 30 FWD 1000 GPM PUMPERS all powered with—

WAUKESHA FIRE FIGHTER ENGINES

Chicago Tribune photo



WAUKESHA 145 GKB High Output FIRE FIGHTER Engine, 6-cylinders, 5¼ in. x 6 in., 779 cu. in. 240 hp. @ 2400 rpm. counter-balanced, vibration dampened. 3½ in. 7-bearing hardened crankshaft, dual ignition, precision bearings, overhead valves with Stellite-faced exhaust valves and seats, removable wet sleeve cylinders. Get Bulletin 1594.

239

FWD Pumper, Model F-1000-T, equipped with Waterous CD-3 two-stage centrifugal pump. Powered with Waukesha 145 GKB High Output Fire Fighter engine, arranged for full electrical equipment and all modern accessories.

WAUKESHA MOTOR COMPANY, Waukesha, Wis.

New York • Tulsa • Los Angeles

DO YOU GET THIS KIND OF FOAM

from your AIR FOAM System?

This photomicrograph is the revealing secret of **NICEROL** *AIR FOAM'S TRULY AMAZING heat stability*

THIS IS WHY *NICEROL*

GIVES GREATER HEAT RESISTANCE

The minute, closely-knit bubbles retain the maximum water content in a foam that is both adhesive and cohesive. This is the reason that Air Foam, made from Nicerol, defies fire breakdown, puts out more fire faster, and definitely outlasts the fire to prevent flashbacks.

NICEROL Air Foam Liquid lasts longer in the can, too, because it is specially processed to prevent corrosion of cans and containers—nor does it form sludge.

NICEROL Air Foam Liquid can be used with all approved types of air foam systems and nozzles.

NICEROL is more widely used throughout the world than any other air foam liquid.

SPECIAL TESTING OFFER

Simply write the one word "SAMPLE" on your official stationery and we will send to you: Freight pre-paid, anywhere in the U.S.A. or Canada, one 5-gallon can of NICEROL Double strength Air Foam Liquid, for $20 C.O.D. (or please enclose check). Test this sample can through your existing foam system—to produce 1,650 gallons of tough foam from only 165 gallons of water, fresh or salt.

The $20 cost of this sample will be deducted from your first order for NICEROL of 100 gallons and over.

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THE LONGER LASTING AIR FOAM

Keeps longer in storage—Puts out more Fire Faster
Outlasts the Fire

INQUIRIES INVITED FROM DISTRIBUTORS AS WELL AS USERS. FULL TECHNICAL AND COMMERCIAL DETAILS AVAILABLE FROM

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- Versatile Multiversal can be mounted or carried.
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- Smooth internal flow ways with no sharp corners. Self sustaining. Once placed in position and under pressure, needs no further attention.
- Furnished with 3 or 4 inlets.
- Either hand wheel or lever control.
- No turbulence, little friction loss.
- Meets Federal Civil Defense specifications for pumpers.
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They Deserve the Best . . . **AKRON BRASS!**

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AKRON BRASS MFG. COMPANY, INC.
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GREATER STREAM RANGE AND PROJECTION

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FIRE FIGHTING EQUIPMENT

You can depend on Pin Point Coordination with Motorola 2-way Radio

Complete Command of All Units Through Electronic Communications Means Better Fire Fighting Control

"Round-the-clock" communications are a *must* to modern fire fighting effectiveness. Versatile Motorola systems, first choice of 75% of radio-equipped fire departments, give you complete command of inter-unit and base-to-field coordination at all times.

Motorola's better parts, years ahead design, and precision workmanship insure the finest in fire control communication systems. Eight exclusive improvements give you time-tested durability . . . lowest overall maintenance. The Motorola "Permakay" wave filter eliminates 15 nuisance tuning adjustments *forever!* Let an experienced Motorola engineer in your vicinity give you the complete Motorola 2-Way Radio story.

IMMEDIATE CALL for more equipment meets emergency conditions efficiently and without delay.

DISPATCHER receives call, relays messages to additional units—and help is sent on the way instantly.

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Today we are all aware of the disastrous and far-reaching effects of a major industrial fire. Owners . . . management . . . employees . . . customers . . . almost every one suffers, in one way or another, when a serious fire strikes.

Could it happen to your plant? Now is the time to take a long, close look at your plant's fire protection measures. Remember, the local fire protection ordinances normally only set minimum standards. Compliance with these ordinances is no guarantee of fully adequate firesafety.

One way to be absolutely sure of the efficiency of your plant's fire protection facilities is to call in an expert C-O-TWO Fire Protection Engineer. He is ready and willing to help you with any or all industrial fire hazard problems.

There is a personal sense of responsibility inherent with C-O-TWO Fire Protection Engineers that assures you of fully adequate firesafety . . . a definite plus in your behalf. Whether it's fire detecting or fire extinguishing . . . portables or built-in systems . . . C-O-TWO means top quality backed by experienced engineering that results in operating superiority for you at all times.

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MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

Squeez-Grip Carbon Dioxide Type Fire Extinguishers
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Built-in High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems
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Save More Lives With E & J RESUSCITATORS

- In asphyxiation cases the victim needs oxygen FAST; *the E & J breathes pure oxygen for the patient automatically, safely and effectively as long as necessary.*
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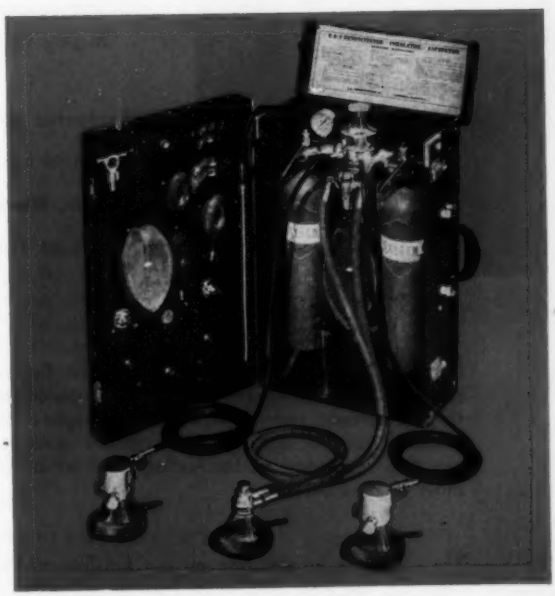
- The victim's heart action may be weak; *the alternating positive and negative pressures as used by the E & J have been shown to benefit heart action.*

These are just a few of the reasons why Rescue Squads call the E & J their "greatest life-saving tool." Check these and many others at a free, full-scale demonstration right in your own Department. Just write or wire today to:



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E & J MANUFACTURING COMPANY

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Symbol of Quality-Service-Protection . . . for the modern fire fighter

The famous Midwestern Manufacturing Company trademark is your guide to the finest protective clothing that money can buy—garments that are specifically designed to help safeguard your men's life on every run—enable them to use their equipment to the fullest advantage. Superior quality, design, fabric texture and many exclusive features have made Midwestern Protective Clothing highly favored wherever men fight fires.

- **Exclusive Safety Features**
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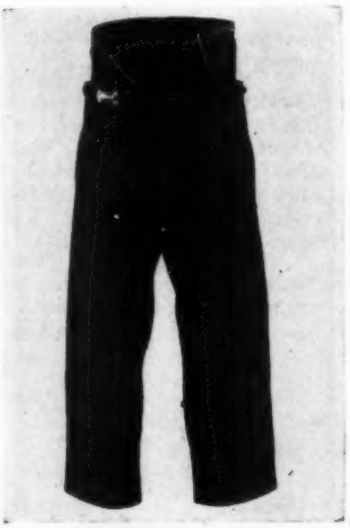

We manufacture both rubber and fabric fire coats. In our vast selection of materials you will find the type of fabric exactly suited to your climate and needs. You can depend on the softness and flexibility of the high grade materials used to meet your most exacting requirements for lasting comfort and service under the most rugged conditions.

For complete information on our full line of firemen's protective clothing, see your Midwestern dealer. A letter to the factory will also bring you literature and material samples for your inspection.

MIDWESTERN MFG. CO., Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Coats**

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AMERICAN LAFRANCE

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Outstanding performance, then and now

At expositions and competitive tests, LaFrance steamers consistently won first prize. On September 8, 1878, the LaFrance Fire Engine pictured at top outperformed all other fire engines at the Grand Trial in Chicago. It threw a stream of water 276 feet 8 inches in less than 10 minutes from a cold start. At Providence, R. I., during the International Association of Fire Engineers Convention (now I.A.F.C.) on August 30, 1916, a series of tests demonstrated the superior performance of American-LaFrance for all types of pumps in motorized fire engines.

The American-LaFrance reputation for leadership has been earned by consistent adherence to high standards of quality and performance. With standardized ratings, competitive testing is no longer the basis for selection. The majority of fire departments now select equipment by the record of consistent, dependable performance; the ability of the manufacturer to render service for the life of the fire engine; and features of construction that provide maximum value with long life. Get your copy of the "EXTRA VALUES" booklet illustrating some of the reasons for outstanding performance of American-LaFrance fire engines.

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ELMIRA, N. Y.

LAFRANCE FIRE ENGINE AND FOAMITE, LTD.

TORONTO, CANADA

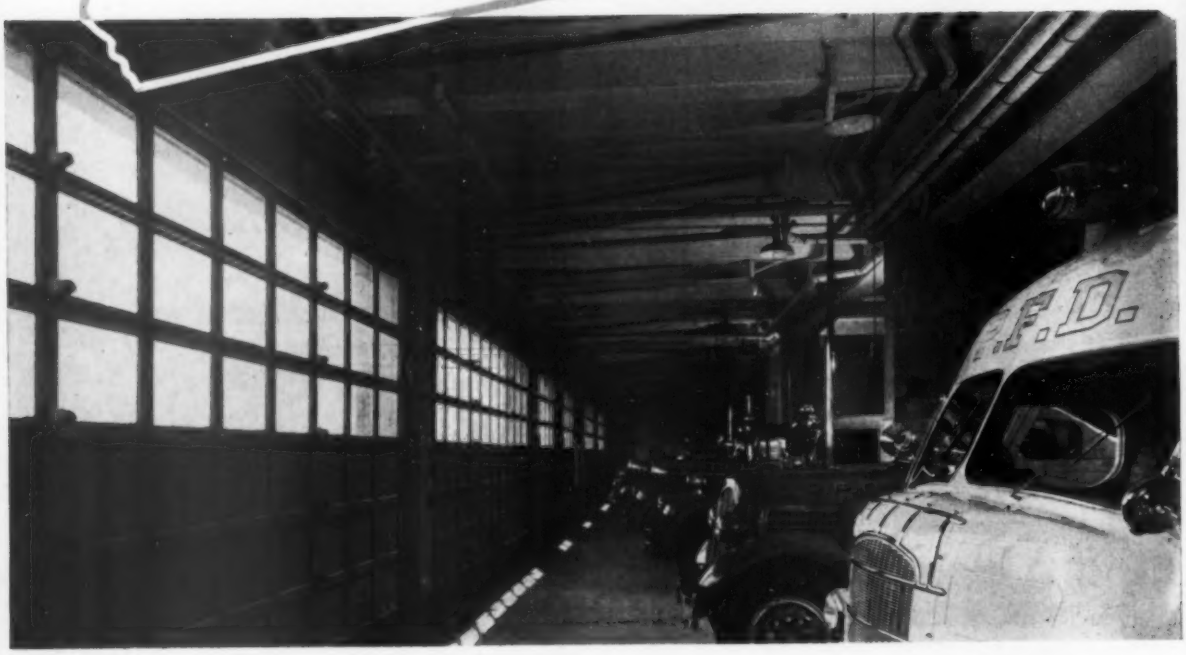
Portland Central Station has drive-through entrance and exit openings, all with The "OVERHEAD DOOR."

6 exit portals of Central Fire Station, Portland, Ore., equipped with The "OVERHEAD DOOR"—electrically operated.

IN ★ Portland IT'S...

THE "OVERHEAD DOOR" TRADE MARK

for FAST, DEPENDABLE FIRE-STATION DOOR SERVICE!



"30 of our Doors in use, and figuring on more!"

—reports Overhead Door Co. of Oregon

Meeting the most exacting demands of day and night service, The "OVERHEAD DOOR" has proved its dependability in the Fire Stations of Portland, Oregon. Thirty have been installed and our distributor writes: "We are still figuring additional work for the Portland Fire Department. The doors have given excellent service and are very well liked by the personnel. The electrically operated doors in the main station have a 2-minute delay mechanism which automatically closes them after the engines have left—an important fuel saver."

Specify THE "OVERHEAD DOOR" *when planning new stations or modernizing. Look for this trade-mark in your phone book and call your local dealer for details today.*

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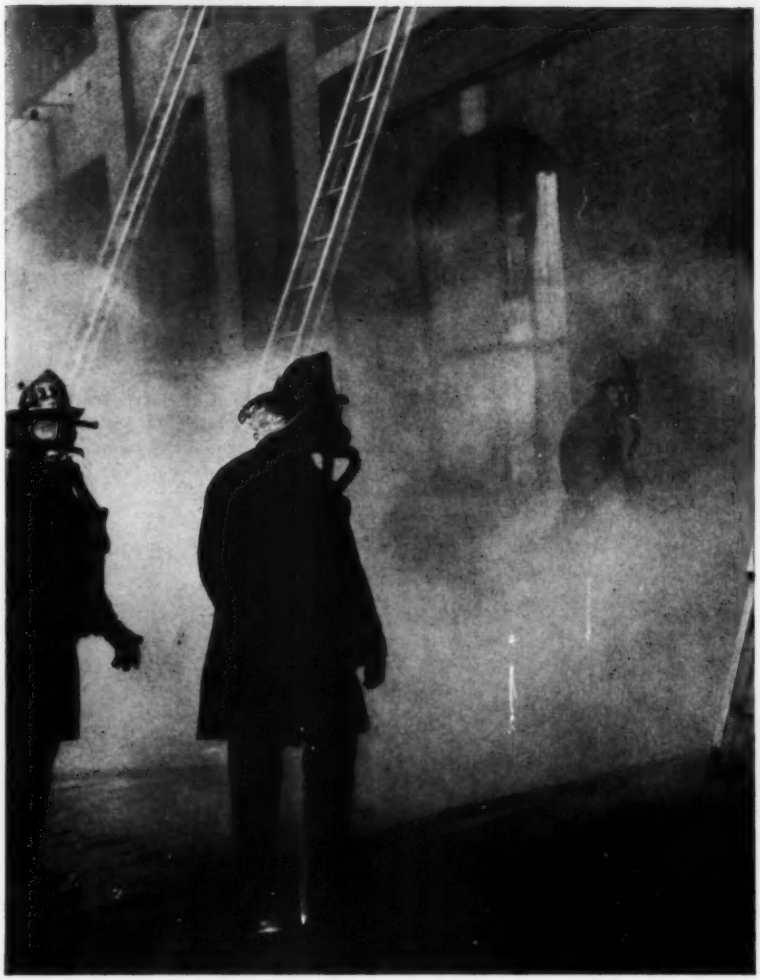
Manufacturing Divisions: Hillside, N. J. · Nashua, N. H. · Cortland, N. Y. · Lewistown, Pa. · Dallas, Texas · Portland, Ore. · Oklahoma City, Okla. · Glendale, California



Philadelphia fire fighters find "Big Bertha" miracle-aid in cellar fire.

Big Show by "Big Bertha"

In the cellar of the burning building above, "Big Bertha" is putting on a big show.

Before she arrived, ordinary hose lines proved no help. Upon her entrance, the fire was controlled in minutes.

"Big Bertha", so christened by Deputy Fire Commissioner George Hink of Philadelphia, is a giant WaterFOG nozzle. Delivering 500 gallons of water a minute in a fire-eating mist, "Big Bertha" is ordinarily used on turrets, portable deluge sets or ladder pipes. It can be attached to regular hose lines by means of a Rockwood Swivel Handle Play Pipe and a Rockwood Ball Type Shut-Off.

This giant nozzle not only controls fires rapidly but reduces temperature of entire surrounding area, protects firemen from smoke inhalation — and speeds return of fire companies to their station. Put "Big Bertha" on *your* fire force — it is but one of many Rockwood portable fire-fighting items that engineer water to cut fire losses.

ROCKWOOD SPRINKLER COMPANY

Engineers Water... to Cut Fire Losses

How Rockwood Engineers Water to Cut Fire Losses

A Solid Cone of WaterFOG is discharged by the Rockwood Type "B" 500 G.P.M. High Capacity WaterFOG Nozzle. Millions of fine water particles completely fill the cone preventing vapor pockets. As particles enter fire area, they turn into steam.

Rockwood Type B High Capacity WaterFOG Nozzle, combined with Swivel Handle Play Pipe and Ball Type Shut-Off, quickly connects to ordinary hose lines, thus enabling this powerful nozzle to be used in hard-to-reach areas such as cellars and on large flammable liquid fires.

SEND FOR THIS INFORMATIVE BOOKLET

ROCKWOOD SPRINKLER COMPANY
Portable Fire Protection Division
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Please send me your illustrated booklet on Rockwood fire fighting products.

Name.....

Title.....

Company.....

Street.....

City.....

Zone.....State.....

High-value property saved, no firemen hospitalized

Says George Hink, Deputy Commissioner, Philadelphia Fire Department.

From the PFD News

JANUARY 25, 1954 ISSUE:

"Our fire fighters, using modern fire fighting techniques and wearing *Scott Air-Paks,* confined this stubborn blaze to its point of origin.

"Leading the fire fighters were Chief of Department George Hink, Assistant Chief Joseph M. Clarke, Deputy Chiefs Augustus P. Lord and Wm. Haas, and Battalion Chiefs Finestone, Kincy, Mellon and Meskill.

"It was under cover of the heavy fog streams and the protection of self-contained breathing apparatus that the fire fighters were able to make their way to the seat of the fire through blistering heat.

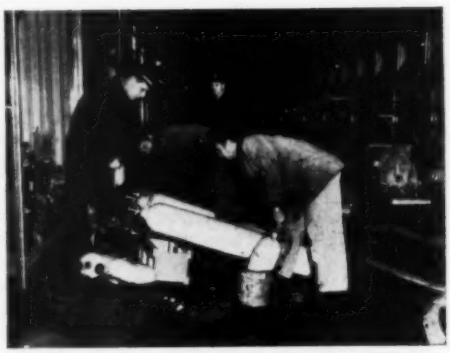
"Despite the serious threat to the Sun Ray Store, the Horn & Hardart Restaurant, the Arrow Store, the Reading Terminal and the entire office building above, the efficient work of the fire fighters resulted in confining this stubborn fire to the sub-basement storeroom.

"Most important of all was the fact that not a fireman required hospitalization. Minor injuries and effects of smoke inhalation were held to a minimum.

"Once again the officers and members of the Philadelphia Fire Department have demonstrated that they have justly earned the title 'First in Fire Fighting.' Extra credits are due the officers and men of the Special Service Section, whose efficient placement and operation of the several smoke ejectors and exhausters, and the servicing of the *Scott Paks* contributed greatly to the successful extinguishment of this fire."

"At the two-alarm Sun Ray Drug Co. fire in downtown Philadelphia on January 3rd, the use of modern firefighting equipment and techniques dramatically demonstrated their value. Property losses and personnel casualties would have been appalling," said Chief Hink.

PFD Firemen breached *four* walls to reach the source of the fire. Chemical analysis of the smoke revealed that a few breaths would render a man unconscious.



Part of the PFD on-the-scene breathing air recharging facilities. Refills are made for less than 50c each. Air not used is not wasted—it may be used next time.

* *Official Philadelphia Fire Dept. Photographs*

For complete information on the Scott AIR-PAK...write today!

SINCE 1930 Scott FOR SAFETY—FOR SERVICE

SAFETY EQUIPMENT DIVISION

SCOTT AVIATION CORP.

215 ERIE STREET • LANCASTER, N. Y.

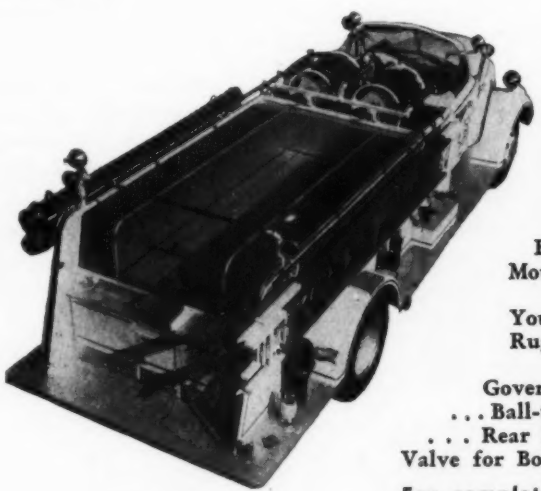
Canada: Safety Supply Co., Toronto — Branches in principal cities Export: Southern Oxygen Co., 15 West 57th Street, New York 19, N. Y.

Beauty's the final result of

ENGINEERING EXCELLENCE!

American Fire Engines please the eye, yes — especially because their exterior beauty results directly from engineering excellence and careful workmanship *from the chassis up.*

Famous for outstanding engineering features inside and out, they're designed with one goal in mind: To *give you the greatest possible fire-fighting effectiveness!*



FINE FEATURES LIKE THESE INCREASE OPERATING EFFICIENCY . . .

Famous Barton Super-Fog Gun . . . for pressures from 300 to 650 lbs.

•

Your choice of two types of brilliantly engineered Barton-American Fire Pumps . . . Mid-ship or Front-Mounted Models.

•

Your choice of truck chassis with covered or open cabs. Rugged bodies planned for functional efficiency.

•

Governor with Finger-tip Control — No Adjustments Necessary . . . Ball-type Discharge Valve with Remote Control Locking Handle . . . Rear Filler with Spring-Loaded Valve which doubles as Relief Valve for Booster Tank . . . and many other features.

For complete information, contact your nearest representative!

American

FIRE APPARATUS CO.

P. O. BOX 1024, MAIN ST. ROAD, BATTLE CREEK, MICH.

"Always Pioneering with Better Engineering!"

FASTER

MORE EFFECTIVE... MORE DEPENDABLE

FIRE-STOPPING POWER

MODEL 20-B

ANSUL
Chemical Company
FIRE EQUIPMENT DIVISION • MARINETTE, WISCONSIN

ANSUL

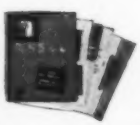
FIRE EXTINGUISHING EQUIPMENT

FASTER . . . A short, quick downward motion of the puncture lever pressurizes the extinguisher and it is ready for instant use.

MORE EFFECTIVE . . . Even the inexperienced operator gets near-expert results because of the ease of operation and handling. In addition ANSUL *"PLUS-FIFTY"* Dry Chemical has greater fire-killing power.

MORE DEPENDABLE . . . Exclusive ANSUL-ENGINEERED design features include water-tight and corrosion-resistant construction, easy, on-the-spot recharge without special tools and other exclusive Ansul developments which insure greater dependability.

FIRE-STOPPING POWER . . . ANSUL FIRE EXTINGUISHERS have the highest ratings for fire-stopping power ever awarded any type of class B and C fire extinguishing equipment.



Send for File No. B-205. You will receive a variety of helpful printed matter. Included is our latest catalog which describes Ansul Extinguishers of all sizes — from the small Ansul Model 4 to Ansul Piped Systems and Ansul 2000 lb. Stationary Units.

OFFICES AND DISTRIBUTORS IN PRINCIPAL CITIES IN THE U. S. A., CANADA AND OTHER COUNTRIES

ANSUL

PROVIDES THE MOST COMPLETE LINE OF DRY CHEMICAL FIRE EXTINGUISHING EQUIPMENT

HAND PORTABLES

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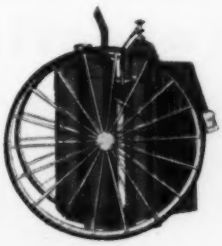
NEW WHEELED PORTABLES

MODEL 150-B



MODEL 350-B

In Ansul's complete line of Fire Extinguishing Equipment there is a model of just the right size to adequately protect nearly every type and area of class B and C fire hazards in, or around, your plant. And, more important, even the largest capacity wheeled portable and stationary equipment by Ansul, is designed for quick, easy, one-man operation.

Ansul Fire Extinguishers are designed for maximum effectiveness even when used by inexperienced employees. They are easy to operate and can be quickly recharged "on-the-spot." No special tools are required for recharging, inspection or maintenance. In addition, all Ansul Equipment is water-tight and corrosion-resistant for longer, trouble-free service.

TRUCK MOUNTS, TRAILERS AND FIRE TRUCKS

MODEL J1-340

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PIPED SYSTEM

STATIONARY EXTINGUISHERS AND PIPED SYSTEMS

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MANUFACTURERS OF DRY CHEMICAL FIRE EXTINGUISHING EQUIPMENT, REFRIGERATION PRODUCTS, INDUSTRIAL AND FINE CHEMICALS AND LIQUEFIED GASES

Your Fire Protection Starts at the Alarm Box

Day and Night, every hour of every day, your Municipal Fire Alarm System is ready to put trained men and equipment into *immediate action.*

There are no delays, no mixed-up instructions, when the Fire Alarm Box is used. *Yet the community's yearly cost for this dependable service is usually less than 75¢ per person.*

Our new booklet, "The Economy of a Fire Alarm System" will give you interesting information about this subject and its importance to your community. For your copy, just return the coupon. There is no obligation.

GAMEWELL®

THE BOX IS POSITIVE

Reduces Human Error

THERE IS NO SUBSTITUTE FOR THE FIRE ALARM BOX SYSTEM

THE GAMEWELL COMPANY, DEPT. FE
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Please send my copy of "The Economy of a Fire Alarm System," at no obligation.

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APRIL, 1954

FIRE ENGINEERING

VOL. 107, NO. 4

With the Editor

Distintegrating Alarm Systems

No one acquainted with the nation's fire service, and its problems in suppressing destructive fire, questions the importance of fire department communications. No one familiar with such conditions would begrudge the expenditures necessary to bring such communications facilities up-to-date and to keep them so.

This being true, it comes as a shock to witness not only the failure to provide the necessary funds, to bring municipal fire department communications into line with other improvements in the fire service, but even to keep existing, outmoded systems from going completely to pot.

For, believe it or not, this critically essential service—and when we say "service" we embrace the whole gamut of fire department communications—is being allowed in many instances to disintegrate and decompose to the point where it definitely jeopardizes the effective operation of fire departments.

The situation is best evinced by disclosures arising out of presentations being made fire departments by commercial telephone interests, to take over and operate municipal fire alarm and other fire department communications, lock, stock and barrel. Almost every such solicitation stresses the obsolescence of the municipal communication plant (except radio, of course, which is a healthy newcomer to the fire service), and urges its replacement by telephone company facilities and services.

It needs no magnifying glass to prove that on this basis the private and commercial communications interests do have good grounds for their solicitation, whether or not their services are justified from the viewpoint of cost and efficiency.

One has only to review the recommendations of the National Board of Fire Underwriters, and the various rating bureaus, to learn how far below efficient operating standards so many fire alarm bureaus have fallen.

Although other essential branches of the fire service have been able to replace out-of-date apparatus and equipment with new, modern facilities, the majority of fire communications headquarters are in a sad state of disrepair and, in many cases, are totally inadequate to handle the increasing volume of communications traffic essential to efficient fire department operations. There are too few underground circuits; circuits are overloaded; there are too few boxes to provide anywhere near safe coverage; and there are too many boxes of ancient vintage. In many of our largest cities the fire communications center is badly located, a perfect "sitting duck" for enemy attack, or saboteurs; and a ripe fire hazard.

For the most part, those in charge of fire communications, fire chiefs and fire alarm superintendents, are not to blame for this distressing and alarming condition. They have repeatedly warned their local officials and taxpayers of conditions, and as often sought funds to rehabilitate their plants; but to little or no avail.

If ever a selling job was needed by the fire service it is in this category of fire service communications. Substituting the outside commerically owned and directed system for the municipal owned and operated system is not the cure. Shifting ownership or direction to outside interests isn't going to absolve fire chiefs and their fire departments of responsibilities for providing safe, accurate, dependable communications in their departments. Taxpayers look to their fire departments for protection against fire. They expect the fire department to give it to them. They won't tolerate any passing the buck to the telephone company, or any other interests.

Sub-letting the communications plant to outside interests isn't going to relieve the fire department of the obligation to deliver an efficient fire safety service.

Before city fathers or fire officials act to "get out from under" the discouraging task of running an efficient fire communications system with run-down facilities, by farming out their plants to any outside interests, they had better weigh all the facts.

In this contingency it might be necessary to employ competent outside engineering counsel. At any rate, if the fire service wants to *retain* and *maintain* its own critical fire communications systems, it had better act now.

Fred Shepard

Buffalo General Alarm Fire Causes Million Dollar Loss

Other Blazes in Four-Day Period Up
Total Losses to Nearly $2,000,000

By PAUL C. DITZEL

THE first official general alarm fire in the history of the Buffalo, N. Y., Fire Department recently caused an estimated $1,000,000 damage to the 10-story brick, steel and concrete building owned by the Bison Waste & Wiper Co.

The blaze, in a heavily industrialized area of the city, was the first really large fire directed by Charles W. O'Halloran, recently named fire commissioner of Buffalo.

More than one dozen firemen and civilians were injured during the long battle on March 15, 1954, and one fireman died of a heart attack, believed to have been brought on by exertion while fighting the fire.

The general alarmer also was the signal for a series of other serious fires, two of them multiple alarms. Damage from the fires during an extremely busy four-day period is expected to total nearly $2,000,000. One of these fires was in another mercantile building only six blocks away from the Bison Waste & Wiper blaze.

The 10-story Bison building formerly was a part of the Larkin department and mail order house holdings and was built in 1912. The structure was of fire resistant construction and sprinklered. President Sidney S. Kagner of the Bison firm said his company planned to move all of its operations to the plant by April 1. The company manufactures wiping cloths and packs waste materials and textile wastes. Waste paper also was stored in the building. The firm employed 90 in the building.

The Bison Company occupied the first five and the tenth floors, and the rest of the building was rented out to other firms. Part of the third floor and all of the sixth and seventh floors were used by the Hewitt Restfoam Division, Hewitt-Robins, Inc., to store new rubber cushions for automobiles and furniture.

The Bell Aircraft Corporation used the eighth and ninth floors for storage. A company spokesman said that noncurrent, non-vital records and miscellaneous furniture were stored there. Other space in the Bison building was occupied by the Irving Paper Mill Supply Co. and the CJE Iron Works of Blasdell, N. Y.

Total damage at the Bison building, fronting on Van Rensselaer, Exchange and Carroll Streets, is expected to give Buffalo its second most costly fire in the past 25 years.

Two other gigantic warehouses created a severe exposure problem. The Seneca Warehouse Company Industrial Building, 701 Seneca St., was connected to Bison by three catwalks, one each on the third, fifth and seventh floors. The catwalks were badly damaged and the rear of the warehouse was scorched. A thick firewall prevented communication but two tenants, Sattler's, Inc., and College Knitting Mills, Inc., reported water damage from hose lines and their own sprinkler systems which were set off. Damage at Seneca probably will reach $100,000.

The Larkin Co. Warehouse Bldg. was to the east of the burned building and on the opposite side of Van Rensselaer Street. It was connected to Bison by two bridges, the upper of which collapsed during the fire. The street between the Larkin and Bison warehouses was no more than 20 yards wide.

Irwin E. Deull, president and treasurer of the New York Fire Adjustment Corporation, estimated damage to the building and contents owned by Bison at $1,000,000 "or perhaps a little more." He said the Bison loss was "partly covered by insurance."

Commissioner Halloran said later the Bison building held up remarkably well.

"It is nowhere near a complete loss," he observed. "Most of the concrete floors are intact, although there is some deterioration from heat. The major loss probably is in the contents."

The fire apparently started when welders, working in the third floor premises of Bison, ignited tar paper between the ceiling of the third floor and the floor of the fourth. Arson investigators interviewed four iron workers who said they were installing iron beams on the third floor ceiling. The beams were to support the fourth floor where the Bison firm planned to install a laundry, requiring heavy machinery.

Welder Daniel Vujukovick said he was on a ladder when a spark "ignited some tar in the ceiling and the blaze started."

"I got down from the ladder as fast as I could and ran for a fire extinguisher

Pall of smoke rolls over Buffalo, March 8, as firemen battle general alarm blaze that gutted 10-story Bison warehouse. Shown are heavy streams from ladder pipes and deck guns operating on fire and covering exposure to right, the huge Larkin Warehouse.

in the corner," he said. "It was empty. I ran out of the room and downstairs to get another one. . . . When I got back the room was full of smoke."

Even more significant, was Commissioner Halloran's disclosure that he learned a section of the sprinkler system had been shut off in the building while the welders worked.

Published statements that the sprinkler system was inoperative were denied by Bison President Kagner who said the system "definitely was turned on." He said the system and the fire extinguishers were all in good working order.

Bison Plant Manager Irvin Yenoff believes he turned in the first alarm.

"I heard our own fire alarm from my office," he said. "I ran out into Exchange Street and turned in the alarm from a box. It was only minutes until fire equipment arrived. We got everyone out. . . . There was no panic."

Yenoff said employes were warned by a public address system, by sprinklers going off or the alarm system.

The first alarm was sounded at 1:36 p. m., and the first due companies, Engine 32 and Truck 5, were stationed on Seneca Street, only a block away. The second alarm was pulled at 1:39 p. m., indicating the fire had a good hold before the fire department was notified.

As is customary in Buffalo, Commissioner Halloran responded to the second alarm. Here is his eye-witness report:

"When I arrived, the northwest corner of the building was on fire and giving off vast and dense clouds of smoke from burning rubber. The crews were moving into position when the fire gained rapid headway on the third floor. Within 10 to 15 minutes it was apparent the fire was out of control on the third floor and the third alarm was sounded at 2:18 p. m. The fourth alarm was sounded at 3:15 and the general alarm at 3:20."

Commissioner Halloran said the department's turnout of 32 engines, 15 trucks and miscellaneous equipment fought "Buffalo's third or fourth worst fire in terms of danger to other property." He said it was the largest concentration of apparatus since the 1931 blaze at the Masten Avenue Armory.

The quick spread of the fire could have been due to explosions of undetermined origin which forced pipemen to retreat and temporarily trapped 12 men.

"We had the fire almost extinguished when it suddenly broke out with a vengeance following an explosion," said Battalion Chief William E. McGee, one of those trapped. "There were about a dozen fire fighters on the third floor near where the fire started.

"We had reached the third floor by climbing inner stairways. With great suddenness black smoke began to fill the entire floor. Within seconds it became so dark we were unable to find our way out," said Chief McGee.

"We groped our way to windows on the Exchange St. side of the building. The smoke became so intense that we couldn't even see the ground below."

Commissioner Halloran, who was directing operations on Exchange St., spotted the firemen along with four workers also trapped. He ordered two aerial ladders raised and they were brought down.

When general alarm apparatus reached the scene, Commissioner Halloran sent several hose lines to the five top floors of the Larkin Warehouse with instructions to cover exposures.

High pressure wagons and lines operated from aerial ladders were brought into play. Equipment included two 1800 g.p.m. turret nozzles on the high pressure wagons and six 1200 g.p.m. turrets. Nine aerial ladders were used. Eight pumpers worked into the sprinkler systems of the Larkin and Seneca warehouses to maintain pressure there. Six other pumpers were attached to the standpipe systems in these buildings, forcing water into the Bison building.

Firemen thought they could confine the blaze to the third floor early in the fight, basing their belief on the sprinkler system and the fire-resistant construction. But heat from smoldering rags and foam rubber set off large numbers of sprinkler heads, bleeding the system. The large number of heads opened used a larger volume of water than lines feeding them were able to supply.

Another obstacle was the location of bales stacked near or at windows, thus stopping streams from reaching flames.

"The fire spread rapidly through floor openings to the fourth floor," said Commissioner Halloran. "If the sprinkler system had been working, it certainly would have been ineffective at that time because of the large number of sprinkler heads already opened.

"The fire then spread to the eastward, fully involving the third, fourth and fifth floors."

Commissioner Halloran said he thought the quick spread of the blaze might have been caused by floor openings, probably chutes between floors, fire doors held open or structural changes.

"It was apparent that something must be done to save the adjoining building across Van Rensselaer Street (Larkin Warehouse). The flames were leaping across and I sent crews into the building. There were indications of fire on the seventh and eighth floors and the crews knocked the indoor sprinkler heads off near the windows to form a water curtain," Commissioner Halloran said.

"On Van Rensselaer Street, two high pressure crews threw up a water curtain between the Bison and Larkin warehouses. That water curtain, I believe, saved Larkin's."

Commissioner Halloran said he sounded

Although the involved Bison Building (right) was connected with huge Seneca Warehouse (left) by several catwalks, the Buffalo Fire Department, through intelligent covering of exposures, was able to confine the fire to the Bison structure.

the general alarm, which called the off-duty shift, when the Bison fire continued to give indications it might communicate to the two other warehouses. He said the fire began to be brought under control between 5 and 6 p. m.

Operations were made easier by the use of walkie-talkie radio sets which communicated from various points with the chief's car.

Gigantic clouds of thick black smoke poured from the 10-story building and a strong southwest wind carried the smudge eastward.

Late in the afternoon, firemen were able to take up positions on the upper floors and roof of the Seneca Warehouse where they operated streams into the Bison Building. At that point, Commissioner Halloran declared the fire under control.

The comissioner, who had ordered all men out of the building, went back in about 8:30 p. m. and said the smoldering rags, rubber, sponge rubber and crude rubber would take two or three days to put out.

Some 400 firemen fought the blaze, including 100 off-duty men.

Roy B. Farrell, Buffalo Fire Department superintendent of apparatus, estimated that about 5000 gallons of gasoline were used. The motors of at least 20 engines were kept running for 10 hours, while some ran for 30.

Officially, the general alarmer was the first such in Buffalo's history. Records show that four alarms were transmitted and additional equipment sent to the 65th Armory blaze on May 8, 1931. In 1928, eight years after Buffalo's present alarm system was installed, flames in the D. & C. Dock and Warehouse at the foot of Main Street got similar treatment.

The fire proved the efficiency of the Erie County Mutual Aid System, set up in 1950 with the help of former Buffalo Fire Commissioner Harold J. Becker. Within minutes after the third alarm, the suburban departments of Kenmore and Lackawanna were alerted. After the fourth alarm, the system went into action, sending seven suburban rigs into the city to relocate in empty houses. Ten more stations were alerted on a standby basis. At no time during the fire was Buffalo left without protection.

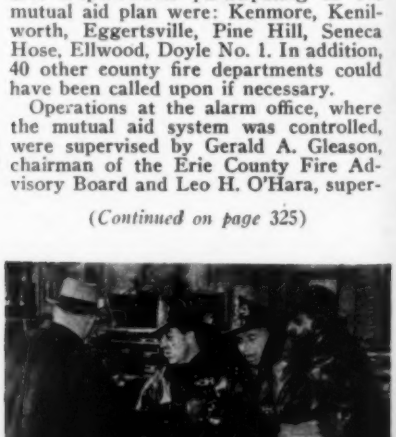
The general alarm cleared Buffalo of all apparatus except three rigs. All off-duty firemen were ordered back to work and enough manpower kept to man six pieces of apparatus in reserve. All other firemen were told to pick up their boots at station houses and to report to the fire. Departments participating in the mutual aid plan were: Kenmore, Kenilworth, Eggertsville, Pine Hill, Seneca Hose, Ellwood, Doyle No. 1. In addition, 40 other county fire departments could have been called upon if necessary.

Operations at the alarm office, where the mutual aid system was controlled, were supervised by Gerald A. Gleason, chairman of the Erie County Fire Advisory Board and Leo H. O'Hara, super-

(*Continued on page* 325)

Buffalo fire fighters were successful in preventing communication of fire from Bison Building to huge Larkin Warehouse shown at right despite adverse wind.

Flames "boil" out of Bison Warehouse, Buffalo, at height of fire. Foam rubber and rags (used in the manufacture of wiping cloths) were among the many combustible materials which contributed to the intensity of the fire.



"Walkie-Talkies" were used at Buffalo fire to expedite and coordinate operations.

Fire Service Ventilation in Principle and Practice

Part VI—Lateral or Horizontal Ventilation

By ROI B. WOOLLEY
Assistant Editor

Editor's Note: The preceding chapter (Part V) was devoted to top, or vertical ventilation as applied to typical occupancies. Part IV reviewed the general fundamentals of opening up over a fire.

Notwithstanding the importance of vertical, and overhead ventilation, there are occasions when this is impossible and when the only recourse is horizontal, ventilation—sometimes referred to as lateral or "cross" ventilation. Also, in many fires, vertical, or top ventilation may prove insufficient to rid a structure of its charge of heat, smoke and gases, and lateral ventilation must be resorted to as an adjunct to vertical ventilation.

In this chapter (Part VI) the author attempts to review these and other major aspects of lateral, horizontal or cross ventilation. He points out there is no single standard or method of procedure for this, or other forms of ventilating a building involved by fire, and reminds his readers that each situation must be studied and coped with according to the best possible size-up and study of conditions and a regard for the imponderables that affect every problem of ventilation. He readily admits that his viewpoints and recommendations may not agree in every detail with those of other fire fighters. At best, all he can hope is that his treatment of this phase of ventilation will inspire further study and a more thorough and scientific approach to the subject.

Note: For purposes of this study "horizontal or lateral ventilation" consists in making fullest use of all available openings in the outside and inside walls, and the use of hallways and other interior lateral arteries or channels of a structure for the removal of contaminated atmospheres and their replacement by fresh air. (author's definition)

IN previous chapters of this series, emphasis was placed on the importance of vertical, or overhead, ventilation, on the accepted theory that by opening up over a fire, particularly where there are free channels or passageways whereby the products of combustion such as heat, smoke and gases may find quickest egress, the structure can be most quickly and safely relieved of its contaminated, charged atmospheres, and search, rescue and fire attack thereby facilitated.

At the same time, it was pointed out that over 90 per cent of the fires encountered by firemen are small to insignificant, wherein ventilation presents no very serious problem. Under these conditions, it was explained, ventilating requires little more than opening a few windows, doors, louvres, and so on.

This last statement might somewhat mislead the reader into believing that only overhead, or vertical ventilation is required for serious fires and that horizontal, or cross ventilation is seldom resorted to except in the minor incidents. This, of course is far from fact.

To repeat again what has been said: no two fires are the same. Each fire, because of this fact, must be surveyed, studied and coped with on its own individual characteristics. That means that each one produces its own problems of locating, confining and extinguishing the fire, which in turn, means that the problem of ventilation will quite likely vary in each situation, and call for different procedures, depending upon the individual case.

Let it be stated emphatically that overhead, or vertical ventilation is not a universal cure for all problems of venting a structure, any more than a single extinguishing agent will suffice equally well for all fire extinguishing operations. There are and will be many instances where top or overhead ventilation is impractical, if not impossible, or where it may be dangerous to undertake it. Also, there may be situations where *no* ventilation of any kind is advisable.

We reiterate what was said about other forms of ventilation: Only accurate size-up and evaluation of the individual situation can provide the answer whether or not horizontal or cross ventilation is called for and if so, how, when and where it can best be accomplished.

Factors That Influence Lateral Ventilation

For the most part, the factors that influence lateral, or horizontal ventilation are the same as those which bear upon other forms of ventilation. It may be worth repeating them:

1. The physical properties involved, i.e.: The building and contents, or occupancy.
2. The life hazard.
3. The location and extent of the fire, and the degree of heat, smoke and gases.
4. The exposures—interior and exterior, including the fire load.
5. Accessibility of points of ventilation, i.e.: roof, windows, and other possible openings, fire escapes, etc.
6. The facilities—manpower and equipment available for the operation.
7. Weather conditions—wind, humidity, etc.
8. Time of day.

Now, let us consider horizontal or

Multiple window openings may aid ventilation. Note contrasts of smoke. Streams are evidently reaching fire in farther section of building, but there's pressure building up in other area as indicated by dark smoke pushing out against wind. Early morning fire in a Los Angeles modern newspaper building, being fought from inside and exterior. Note only portions of upper story windows have been removed for venting.

cross ventilation using the above factors as a yardstick:

1. **Physical Properties Involved:** By this we mean the structural characteristics of the building, and its contents. These should afford the first clues to whether or not one type of ventilation more than another may be called for.

The experienced fire fighter quickly classifies in his mind the types which most obviously call for vertical, and those which suggest horizontal ventilation. He may later find that **interior** conditions for effective ventilation are not what the building **exterior** indicated in his size-up, but in the main, his quick survey of the exterior of the involved structure should provide him with his first and most important clues to the question of where, and how, and what to open up.

Of course, factors as the type of construction and details of area, height, width and depth of the premises should all be considered, as well as the occupancy, and should be known to the first-due companies, at least.

Important to the question of lateral or cross ventilation, are the wall openings, their number and size, and exterior fire escapes and exposures, of which more later. These, in turn, are related to such details as height of the building, whether or not the wall openings have protective coverings—bars or shutters or there areas of heavy glass block and so on, and the way these openings face: whether onto exposures or not, and the extent to which they are to the windward or leeward side of the fire. Finally the size-up should show the extent to which these openings are available for ventilation, rescue and fire attack operations and which, because of fire and smoke involvement, or for any other reasons, are unsuited for ventilation operations.

It is more than likely that the first fire units rolling to an alarm from a building may not notice many traces of smoke or fire, but this should not suggest to the officers in charge that no outward survey of the structure itself is necessary or advisable. The trained, professional fire officer may not *consciously* check on all the details of building design, location and occupancy in every response situation, in his consideration of ventilating, but ten-to-one he does a mental "take" or what may be called an "unconscious size-up" and he registers most of the details on his subconscious mind as he goes into operation on even what appears to be a minor fire.

Thus an experienced officer, pulling into a fire in a multiple type dwelling, will consciously or unconsciously look for evidence of vertical arteries or other factors which would further top level ventilation, whereas should he roll in to a fire in an average type house, let us say, he would be more inclined to look for indications that would further *lateral* ventilation because he knows that unless the fire involves the attic or cockloft spaces, opening the roof will gain him little by way of ventilation.

Roof Ventilation for Dwelling Fires

And while we are on the subject of opening the roof of the average 1½- or 1-story dwelling houses to ventilate interiors, this would be a good place to explode the theory so long held by some fire officers that this is the most effective means of ridding the structure of its charged, contaminated atmospheres.

Cutting a roof merely because there is a smoke condition in a dwelling (unless, as said, the fire involves the attic or cockloft area) is not only a waste of time, and energy but it is the cause of much needless property damage. The reason should be obvious: there is rarely any vertical path for the smoke heat and gases to travel to the roof opening. Except in rare cases, this country's houses have no vertical arteries extending through the ceiling of the top floor, or into the loft or attic voids which could be opened up to draw off the contaminated atmospheres from the floors below. That is why most typical dwelling fires should be vented horizontally, or laterally.

An exception, of course, may be the modern ranch type house having but one floor and a small cock-loft or attic. But even here, such overhead openings should not be made, most fire officers believe, until all attempts at horizontal ventilation have failed.

2. The Life Hazard: Of course, if lives are at stake it is quite conceivable that the best laid plans of opening up may have to be ignored. Saving of life comes first under all conditions and this is one of the paramount reasons for consideration of all the factors of size-up, which bear upon getting quick entry into the structure involved, for search and rescue. Under these conditions ventilating may have to take precedence over all other operations.

Life hazard is indicated by occupancy of the structure involved. The problem of ridding an even so-called fireproof

Left: Afire from bottom to top, this 8-story Detroit malt establishment could not be vented in time to reach fire in early stages. Smoke explosion blew corrugated siding and debris over ladder truck. Four firemen were injured in this $1 million blaze. Right: Lateral ventilation can't carry off heavy smoke charge developed by burning leather in this Boston occupancy. Note how narrow street affects wind currents, which change direction of smoke at rooftop level. Note also shutters on exposure right, which complicate ventilation.

hotel, hospital or other abiding place is a serious one because of the life hazards, and too much time cannot be given to pre-planning for ventilating and rescue strategy in such occupancies. In this conection, readers are urged to study the case histories of such serious fires as the LaSalle Hotel, Chicago; the Winecoff Hotel, Atlanta, Ga.; the St. Anthony's Hospital; the Mercy Hospital, Davenport, Ia., and the numerous fatal nursing and convalescent home fires.

Horizontal ventilation becomes important in all cases where lives must be saved, or persons searched for under heavy smoke and gas conditions. This is because the search and rescue is frequently made not by means of smoke filled interior stairways, but by windows and ladders, or exterior fire escapes. Vertical ventilation may be difficult or impossible in such occupancies due to lack of unobstructed vertical channels for those unburned products of combustion, smoke and gases. The only hope of locating casualties and removing them may prove to be by fast, thorough horizontal or cross ventilation. In this connection, however, the danger may be that too hasty, or wrong ventilation may concentrate the charged, contaminated atmospheres in the very passageways and arteries which should be kept cleared of poisonous air to facilitate the removal of trapped occupants.

Under pressure of attempted rescue, ill-considered haste may conceivably result disastrously by indiscriminately opening up laterally, i.e.: Windows and/or doors onto charged areas so that (a) backdraft occurs; (b) the fire is fanned; (c) exits that could be used by occupants are cut off; (d) fire fighters and rescuers are driven out of the structure; (e) exposures are threatened.

Generally speaking, where search and lifesaving are prime considerations, the initial effort should be to open up overhead, at top levels. If the roof cannot be opened readily over shafts and other vertical arteries, many students consider it wise to horizontally vent the topmost floor, or floors, below the roof structure, or where the existing shafts or other perpendicular arteries terminate. This is a form of employing *lateral ventilation* to draw off the accumulated charged atmospheres from floors below. It might be called deliberately encouraging "mushrooming" at *Top* level on the theory that by providing a free avenue of egress for the charged atmospheres, the heat, smoke and gases in the structure will have less opportunity and tendency to mushroom, or fan out on the *other* floors.

It is true, such expediency may further endanger persons on the upper floor, but it may be the means of saving many times the number on lower floors by preventing spread of heat and gases into the cross passageways and rooms below. No fire officer hopes ever to have to make such a decision.

Once a good flue has been established for funneling out smoke heat and gases at the top level or levels, the intervening floors may be ventilated by opening doors and windows in what may be termed lateral ventilation.

3. Location and Extent of Fire: The decision where and how to apply ventilation methods must of necessity consider where the fire is located, its intensity, and conditions of spread.

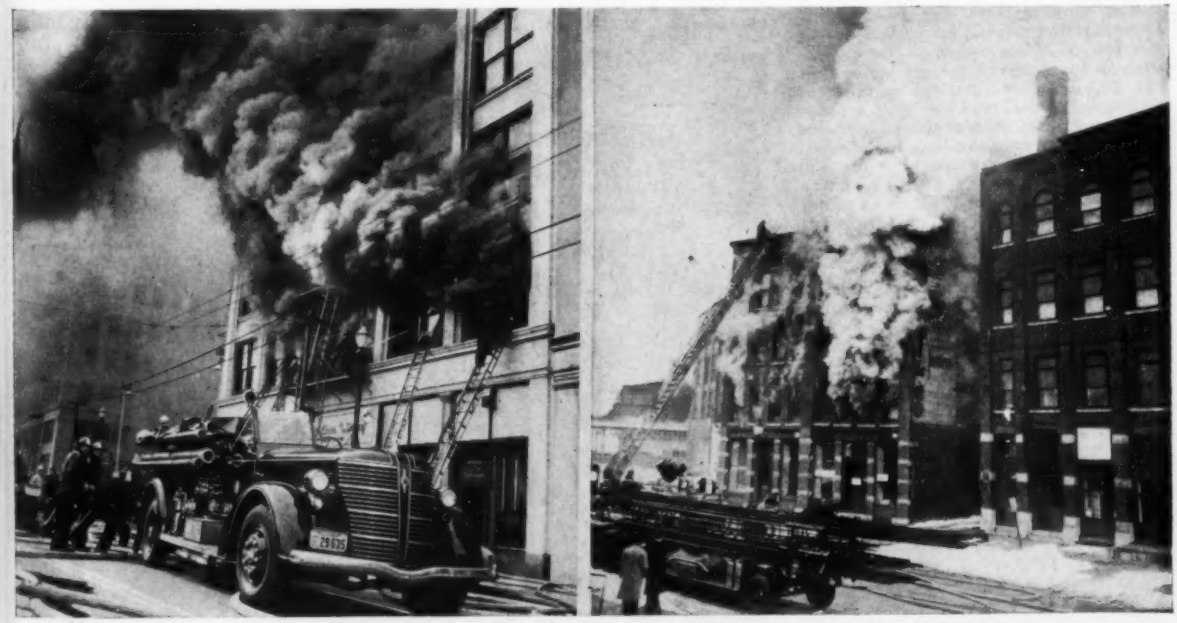
There is a different procedure for ventilating the single room fire from that involving an entire floor; or between the cockloft fire and the basement blaze. That is why it is important to try to locate the main body of fire at least at the earliest possible moment.

Smoke and other conditions may make it almost impossible to locate the heart of the fire, or even to determine its course and rate of spread. There may be heavy smoke emitting a considerable distance from the fire, which may well mislead fire fighters in effecting ventilation. This is one of the complications of opening up a structure and a detail which can render ineffective the best planned ventilation operation.

The use of modern breathing apparatus and masks makes it possible for those charged with opening up a charged building to more quickly effect entry and size up interior fire conditions, and check on intensity and other factors which influence ventilation procedures. Ability to penetrate inside a heavily charged interior of a structure permits of making openings both vertical and lateral, or the closing of openings, to effectuate more rapid ventilation of the premises. At the same time, this may lessen the need for exterior venting, breaking out windows, etc.

A burning mattress or overstuffed couch can fill a structure with smoke and gases to make entry impossible by any except those wearing masks, where the room in which the fire is located has not been sealed off by closing doors and windows. Wearing protective respiratory equipment, a fireman can penetrate to the room, size up the fire, close off the area if hose lines are not ready, thus slowing down combustion and reducing smoke and heat damage throughout the building. With the fire contained until lines are ready to attack it, he can safely open up other windows and outside doors to speed ventilation, knowing that the fire is contained, and when the door of involved room is opened, and firemen hit the fire, the remaining smoke and fumes that escape into the house will be carried out on the lateral air currents.

Where possible, of course, the one-



Left: Lateral ventilation in office building fire. Office buildings such as this San Francisco structure, may be difficult to ventilate because of lack of free vertical arteries and partitioning of floor areas. Here horizontal "floor venting" is being speeded to permit firemen to get to main body of fire. Such conditions dictate wisdom of keeping windows over the fire floor tightly closed. This 5-alarm downtown blaze injured 17 firemen, caused $250,000 damage. Right: Syracuse, N. Y., firemen are preparing to vent roof in this smoky downtown multiple-alarm fire. Some windows on second floor have "blown." Horizontal venting into alley presents hazards due to exposures.

room-fire should be vented directly to the outside, through windows or outside doors, rather than by means of an inside opening such as door or transom. This can be done by making opening from the exterior either via ladders or other available means.

4. Exposures: It is usually more important to give consideration to exposures in lateral or horizontal ventilation than it is in roof ventilation. Fire may follow through opened windows and doors to jump across air shafts and light shafts, courts, passageways, alleys and even broad streets during, or as a result of lateral ventilation operations.

It is well to remember, also, that exposures are not limited to *exterior* properties; they exist *within* the building in which the fire is located. For this reason, lateral, cross or "floor" ventilation as contrasted to shaft or vertical ventilation, may be more of a critical problem in its relation to the spread of fire.

Inspections and pre-planning will help to solve this problem by acquainting fire fighters beforehand with the methods to be followed in case of involvement of the structure.

5. Accessibility of Ventilation: This detail is partially covered in the foregoing. Many times it is difficult to reach points at which ventilation can best be effected: roof tops, and high windows for example. This problem is encountered in both vertical and horizontal ventilation, but it is more common in the latter, particularly where it may be difficult to reach windows, or where they may be shuttered or barred or where openings may be obstructed by merchandise, etc.

It should be remembered that in natural lateral, or horizontal ventilation, the objective is to initiate movement of the contaminated atmosphere toward a selected outlet. This involves not merely locating the right *outlets*; it usually calls for creating the necessary *inlets* or entrances for the *fresh air*. In short, it takes at least two openings to do an effective job of horizontal or lateral ventilation. In some cases cross ventilation may require more than this number of openings.

The more accessible these openings are to the firemen, and to the desired wind currents, the more effective the horizontal ventilation. This subject is discussed further on, and in a later chapter on ventilation by means of powered air movers.

6. Facilities: It should be obvious that lateral or horizontal ventilation, no less than that described in previous chapters, calls for the necessary tools and manpower. Lateral ventilation usually necessitates opening up doors and/or windows. This can be done without material damage, or they can be broken open and wrecked. The only excuse for the latter is when the fire fighter has no appropriate tools at hand to properly force the openings.

Respiratory protective equipment, as we have repeatedly stressed, is a requisite to efficient ventilation practices. So, too, are ample ladders and forcible entry equipment. In olden days it was pretty much the job of the ladder companies to provide this equipment. Today, engine companies are being equipped with practically all the requisites, including masks, to enable their crews, as well as laddermen to carry out forcible entry and ventilation.

There is still a big field for the development of powered air movers, smoke ejectors, injectors, exhausters, circulaters and fans and blowers of every description, for use in connection with ventilation.

7. Weather Conditions: The weather plays a more important part in lateral and cross ventilation than it does in overhead and vertical venting. There is greater danger of spreading the fire through incorrect venting by means of windows and other openings than where vertical arteries are employed to draw off smoke and heat. The whole horizontal operation can be jeopardized by the inadvertant opening of a door, or another window or a shift in the wind, which can reverse air currents, perhaps driving the heated gases and smoke back upon fire fighters, or occupants of the structure.

Many fire officers consider the problem more acute where the fire involves one floor, or part of a floor of a sizeable building. The wind and other weather factors have a bearing on the question of whether to open up the floor above, and/or the floor below the fire and the extent of the venting called for. In one large warehouse fire, windward windows were opened before hose lines were ready to cover possible interior fire extension up a stairway, and before any opening was made on the lee side of the structure. A high wind was blowing and the draft from the windward side found a ready channel up the stairway instead of following a lateral course to a side opening. The fresh air rising with the heated gases increased the fire's intensity and quickly involved the entire upper part of the structure.

Generally, no lateral or cross ventilation should be undertaken without due consideration of (a) the direction and force of the wind; (b) determination of just which side of the involved building is the leeward, and which the windward side; (c) the humidity, and temperature factors.

We have already emphasized the need of protecting exposures in venting operations. This relates directly to the direction and strength of the wind. As said, in lateral ventilation there must be avenues through which fresh air can enter the structure, as well as suitable openings to provide egress for the contaminated atmospheres. These avenues or channels are usually passageways or corridors.

High humidity, with rain, will increase particulary the problems of horizontal and cross ventilation by lowering the buoyancy of smoke and gases, and slowing up air currents. More openings may be required to do effective ventilation under these conditions.

8. Tim of Day: Normally, ventilation of all kinds is more complicated a procedure in night time than during day time. The majority of fires involving search for and rescue of victims occur after dark. This fact, coupled with the added difficulty of operating under heavy smoke conditions, may well complicate the ventilation problem.

Under these conditions, ample lighting equipment, from hand flashlights to portable spots and floodlight is a decided asset.

Some Hazards of Lateral Ventilation

Most of the hazards of improper ventilation previously referred to in this series of studies apply equally well to lateral, horizontal or cross ventilation, and to vertical or top ventilation. A few factors, however, deserve special consideration.

We have referred to one of these above, the possibility of cutting off occupants of the building from ready exits by improper horizontal venting. Frequently the occupants themselves com-

Ultra-modern buildings may present ventilation problems. Little chance of lateral ventilation, and not much opportunity for top level venting, in this ultra-modern Sears Roebuck building, Chicago.

plicate the task of venting by leaving doors, windows or transoms open in their hurried evacuation of the premises. Under these conditions it is possible that too hasty lateral ventilating may set up air currents or eddies which may quickly carry heated gases, and even fire, into these rooms and other areas on the floors.

Every effort should be made to close off such lateral openings and to channel the air currents to natural or created exits.

Another hazard that may eventuate from wrongly conceived or executed horizontal ventilation is the possibility of extension of the fire by lapping, i.e.: from window to window, vertically. This usually follows the ignition of heated gases within the structure, which are brought into contact with outer atmosphere either by misdirected venting, or by the giving way of windows under pressures of the charged interior.

Lateral ventilation should not attempt to use fire doors or other openings in dividing walls or fire stops. In one factory, after a fire was believed under control, a fire door leading to another section of the large building was opened to draw off the remaining smoke and odors. The current of air resulting caused the fire to rekindle and carried it into the other section.

Corridors and passageways are the natural arteries for lateral and cross ventilation; they are also the usual avenues to exterior and interior fire escapes. Where such passageways open up on outside fire escapes every effort should be made to prevent the smoke and heat from cutting off the escape of those who are using or may have to use such means of egress from the building.

Under these conditions it may be good practice to keep the passageway doors (or windows if exit is through such openings) tightly closed and to attempt to develop exhaust outlets for the contaminated air currents, either through rooms at the fire escape end of the hallways (opening the doors and windows of such rooms), or by any other means available. Of course, if the hallways are passable and must be used by occupants of the building to reach the exits opening upon the fire escapes, the exit doors must be kept open, or opened as needed, by a fireman stationed at that point of egress.

Some Observations on Lateral Ventilation Operations

For most lateral ventilation, and for all individual room venting, the natural form of ventilation is the open window or fireplace, if such is present.

Windows of the sash type should preferably be opened both at the top and bottom, two-thirds of the way down at the top and one-third up from the bottom. The top opening allows the heated gases to escape, and the bottom opening admits fresh air.*

Curtains and drapes, blinds or any other obstructions to free passage of air currents should be removed whether at windows or doorways and passageways.

Where the nature and density of the smoke or the possible presence of toxic or other dangerous fumes indicates it, men wearing approved breathing apparatus should ventilate smoke-charged staircases, rooms and hidden voids. This permits them to work without dangerous physical punishment and to reach and open up windows and other points of ventilation which might otherwise prove inaccessible.

Windows in tall buildings, beyond the reach of ladders, may sometimes be opened from above by means of a long pike pole or plaster hook, or some heavy object suspended on a rope. Where within reach of ladders, and the situation calls for it, windows may be broken using the ladder tip. Under some conditions a heavy stream of water may be required to "open up."

The operation of deck and ladder pipes may have an adverse effect on lateral ventilation by tending to drive back smoke and heated gases.

As early as practicable, men should be sent to open, or if that is not possible, to break the glass of windows at the heads of stairs and elevator shafts, and doors in passageways, always providing these actions are necessary, and the layout of the building is such that an exposure hazard is not created. Modern fire safety laws call for providing fire cut-offs on stairways at floor levels, and enclosing elevator shafts. In some localities, also, passageways must be divided by non-combustible doors or partitions. In some situations it may be advisable to utilize a vertical shaft for venting from a certain floor level, in which case the shaft closures may have to be removed. By the same token, it may be necessary to free a passageway of a fire stop or cut-off to effect ventilation. These operations should not be attempted however, except with a full knowledge of the immediate and possible hazards involved, and with the authority of a responsible officer.

In effecting horizontal ventilation, men are more exposed to the dangers of smoke explosions or backdrafts than in other venting operations. Wherever such operations are attempted, men should not needlessly expose themselves in such a manner as to be caught by a sudden blast of heat and gases or by a burst of flame.

Where window shutters are to be removed, operations should start at the top or highest level, the men working downward.

We have said that cutting a roof is to be avoided where opening up overhead will not provide an unobstructed channel to the outer air for smoke and heated gases. In attics of residences, and certain other occupancies, the opening of windows, if available, or louvres at opposite ends of the building, may provide sufficient air currents to remove the contaminated atmospheres.

Ventilating Large Areas

Ventilating individual floors of large unobstructed areas is best accomplished by means of top ventilation over the fire, but horizontal window ventilation may assist, such ventilation being provided by pulling or pushing down the top sash of windows (or breaking out the upper sections if the type of window requires it) to create a cross draft. Where the floor is divided by fire walls and only one portion of the area is affected, doors in the fire walls should remain closed to prevent the heat, smoke and gases from extending over the entire floor area, providing this has not already happened. In such cases a cross-draft may not be possible, then the top sash of windows should be pulled down, and the bottom sash raised, as previously described.

In ventilating a floor above the fire, care must be exercised to keep closed the windows near or directly over the fire floor windows through which fire is projecting or may emit, to prevent the fire from lapping into them. This same precaution should be exercised where windows are located opposite to and on the same level, or above fire-floor windows fronting on or opening into light and air shafts and narrow courts.

In first floor ventilation, where there are no vertical arteries which can be employed to provide unobstructed passage of smoke and heated gases to the outer air, lateral venting, using windows, doors, and any other possible means is advisable, to reduce the infiltration of smoke and fumes to upper floors by roundabout means. The extent to which windows and transoms should be broken out will depend upon the size and construction of the building, and the extent to which the interior has become charged. If removal of a transom over a door or the opening of the main doorway of the floor will suffice, it should be unnecessary to break windows.

In ventilating some mercantile establishments at floor levels, where display windows must be taken out, it may be necessary, also to remove the backing of the show windows.

Removal of Heavier-than-Air Gases at a Fire

The removal of heavier-than-air gases and fumes from an involved building may present serious complications. In some occupancies, and under certain conditions where heat has set up active air currents, they may be carried off by drafts formed by ventilation to release the heat smoke, etc. But where they persist, owing to weather or other conditions, all possible ventilation should be applied at floor or low levels. Where available, powered ventilating equipment should be used to reinforce natural ventilation. In some instances, water fog under high pressures may be restored too.

Reference has been made to situations where no ventilation may be advisable. Every fire chief can recount instances where a fire has consumed most of combustible contents of a closet, or garage, and literally extinguished itself after consuming all the energy-giving oxygen necessary to combustion. To have opened up under such conditions, before the fire has consumed the oxygen would naturally have increased the intensity and destructiveness of the blaze —unless of course, means of complete extinguishment following venting were close at hand.

More often than not, fire fighters cannot determine the extent to which there is oxygen deficiency until they do open up—which accounts in some measure for backdrafts and smoke explosions. In short, there is no accurate way of gauging whether to keep a fire "buttoned up" and attempt to starve it to death, or to open up, and kill it. Where there is this uncertainty and because lives may be at stake, or the fire may be feeding on interior exposures, it is generally advisable to vent such areas without delay.

*There are proponents of other methods of window ventilation but the practice given here is the most universally used.

F.D.I.C. SETS NEW RECORDS FOR ATTENDANCE AND INTEREST

Over 1700 Registered at 26th Annual Instructors Conference in Memphis

"WHERE'S this going to end," exclaimed one of Dick Vernor's bewildered aides, as he checked over the final registration figures of the 26th Annual Fire Department Instructors' Conference on the closing day, Friday, February 26th. For each year the Conference has continued to hang up new totals, regardless of economic, weather, or other conditions.

The resounding total of 1,755 registrations, from over 40 states and the District of Columbia and Canada, and England, Sweden, Italy and the Canal Zone, comprises fire chiefs, fire instructors, engineers and other officials, insurance and fire prevention leaders, educators and others interested in fire suppression. Italy was represented by a dozen fire fighters, including their two interpreters, who are currently visiting this country to study fire control methods under the aegis of the Italian and American governments. They attended every one of the four-day jam-packed sessions of the Conference, as did Chief Frieman, the fire fighter from Malmo, Sweden.

The four-day session opened promptly at 9:23 A.M. on Tuesday, February 23rd, and closed as promptly at 4:00 P.M. on Friday the 26th. All meetings were held in the spacious Municipal Auditorium. During the time there were 43 topics, participated in by 110 speakers and over 100 more in "supporting casts." In the four days, an estimated 6,500 persons were fed by the efficient workers of the Memphis Fire Department, which, with the Western Actuarial Bureau, Chicago, jointly sponsors the Conference.

The visitors were welcomed by Dick Vernor. "You are all guests at an invited party," he announced. "Except to implement the meeting itself, there is no organization, no politics, and nobody running for office. . . . This is simply an idea-exchange among a group of good fellows just trying to help each other to do a good job."

Memphis officials who added their welcome included: Mayor Frank T. Tobey; Vice-Mayor and Fire Commissioner Claude A. Armour; Fire Chief John C. Klinck; Memphis C. of C. president, Col. Roané Waring; W. P. Johnson, president, Memphis-Shelby County Council of Civic Clubs, and Virgil D. Johnson, pres. of Memphis Jr. C. of C.

Exploratory Committee on Water Fog meets in Memphis, to discuss the "past, present and future" of water fog.

Prof. J. R. Douglas (Oklahoma A. & M.) set the tone of the Conference, by outlining how attendees could get the most out of it.

Fire department officers were urged to give closer study to human relations by Malcolm D. Whale (Michigan Dept. of Education) in his educational paper.

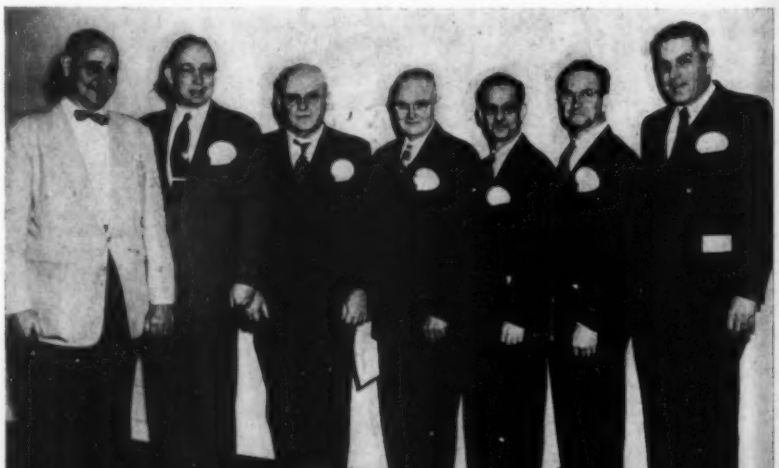
Prof. J. J. Ahern (Illinois Inst. of Technology) conducted a panel and introduced Fire Chiefs Calvin Roberts (Livonia, Mich.) and R. J. McAllister (Plymouth, Mich.) who told about their part in the historic General Motors Fire in Livonia, which left 27,000 persons jobless and decreased business of merchants as much as 65%, in some instances.

Tuesday's luncheon demonstrated the remarkable organization of Memphis firemen to feed more than 1,000 persons quickly. The guest speaker was Frank R. Ahlgren (Memphis Commercial Appeal) who was introduced by Vice-Mayor Claude Armour. The speaker's topic was "How Newspapers Can Stop Fires."

James J. Duggan (Carbide & Carbon Chemical Corp.) led off the afternoon session with an illustrated paper on "Fire Protective Coatings." "Heat retardant coatings," he told the assemblage, "may be a fireman's best friend."

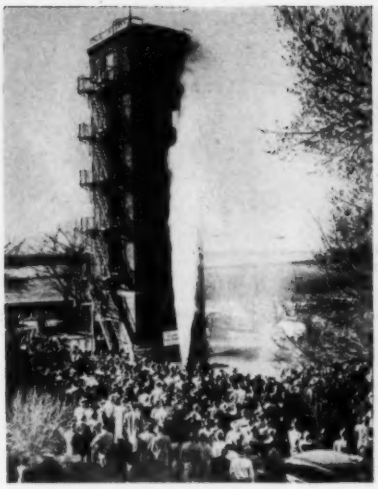
Henry A. Ritgerod (L. V. Martin & Co., Little Rock) capable F.D.I.C. press secretary, spoke on the "Fire Service and the Fire Insurance Industry." What happens when a tornado hits a city was discussed by a panel chairmaned by Dale K. Auck (Federation of Mutual Ins. Co.'s). Panel members were: Batt. Chiefs E. H. Byrne (Cleveland, Ohio F.D.) and Ward Morgan (Flint, Mich. F.D.), and Training Officer Clyde Smith (Waco, Tex., F.D.). The panel discussed means of creating emergency communications, moving fire forces through blocked streets, etc.

Paul B. Hartenstein (Philadelphia Civil Defense Director), explained how a citizens' council on fire prevention in the Quaker City was organized and succeeded in reducing false alarms and fires



Members of the panel on Trends in Fire Training Centers. From left to right are William Barnett, Florida Fire College; B. Richter Townsend, Bureau of Fire, Division of Safety, New York State; R. R. Simmons, Chief Training Officer, Dallas Fire Department; Chief Roi Woolley, FIRE ENGINEERING, Chairman; A. L. P. Schmeichel, West Virginia State Inspection Bureau; Edgar A. Spotz, Director, Fire Service Training, Pennsylvania; Robert Byrus, Director Fire Service Extension, University of Maryland.

Memphis firemen demonstrating the maneuverability of a 1½-inch hand line equipped with a latest type fog nozzle at the FDIC.



Some of the 1700 registrants at the FDIC witness the tests of a new fog nozzle and "jet propulsion" portable pump, at Memphis Fire Department training ground.

through a program of inspections and fire safety organizations. Tuesday evening was "motion picture night."

The second day opened with a "questions and answers" period, the quizmaster being Harry J. Corcoran (Iowa Insp. Bureau, Des Moines) aided by panel members F. K. Duren (Frisco Ry. Co.); E. E. McDowell (Fire Chief, Greensboro, N. C.); A. H. Meister, (Indiana State Fire Marshal); M. J. Quinn (Chief, Chattanooga Fire Prev. Bureau and R. H. Ryan (State Coordinator, Alabama Univ.). This was followed by a 5-minute run-down of Tuesday's proceedings by Robert F. Hamm (Ind. Rating Bureau).

Charles W. Pardee (Western Adjustment & Insp. Co.) spoke on the fire loss estimates; following which B. Richter Townsend (Chief Bureau of Fire, N. Y. State Div. of Safety), told about his State's mutual aid mobilization plan, illustrating his paper with charts. He concluded his remarks with pertinent observations about top-level and local civilian defense.

"Trends in Fire Training Centers" was the subject of another panel, with Chief Roi B. Woolley (FIRE ENGINEERING) as leader. State fire training veterans who served as panel members were: W. H. Barnett (Florida State Fire College); Robert C. Byrus (Dir. Fire Serv. Ext., Maryland Univ.); A. L. P. Schmeichel (W. Va. Insp. Bureau); R .R. Simmons (Chief Training Officer, Dallas F.D.); Edgar A. Spotz (Fire Serv. Training, State of Penna.); and B. R. Townsend.

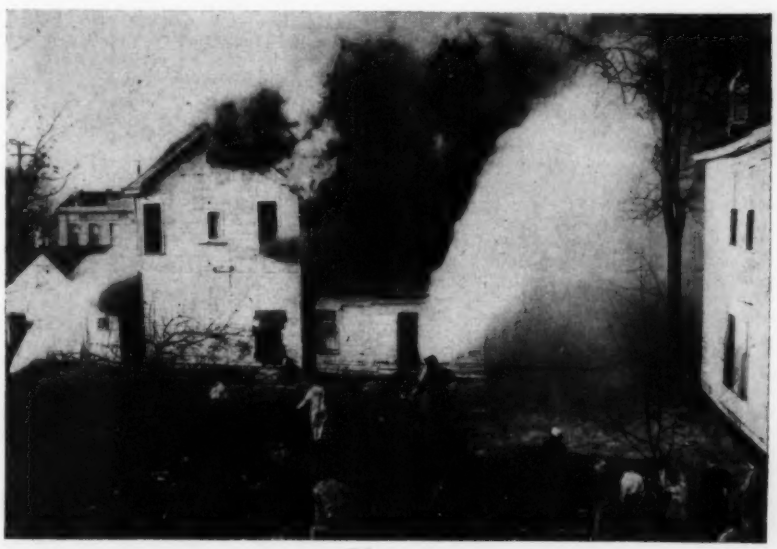
Visual training aids was the topic handled by Carl Clanton (Kans. Insp. Bu.). At the luncheon, on Wednesday, Chief John Klinck presented Capt. Harry Wolff with an honorary membership (and badge) in the Memphis Fire Department. Plaques were also presented by Dick Vernor to Chief Klinck for the Memphis Fire Department, and to the Memphis Chamber of Commerce. The Minneapolis Fire Department Acquatennial Quartette entertained the luncheon with songs, after which George Richardson (Sec.-Treas. International Association of Fire Fighters), introduced the guest speaker, Chief Henry Thomas of Hartford (President, International Association of Fire Chiefs), who stirred the Conference with his plea for greater cooperation in fire *prevention* as well as *protection*.

The dramatic demonstration "Fire Magic" by Lewellyn Heard (Standard Oil Co.) on the chemistry of fire enthralled the vast afternoon audience. This was followed by two short subjects, ably handled by R. D. MacDaniel (Grain Dealers Nat'l Mutual Fire Ins. Co.) speaking on what constitutes fire casualties, and Chas. R. Scott (Ohio State Fire Marshal) who told about his State's mobile training unit.

Warren Y. Kimball (NFPA) discussed new developments in fire service facilities, pumps, hose, nozzles, etc., after which Conference members visited the Memphis Fire Department drill tower, where Joe Fetters (University of Missouri), assisted by Warren Kimball and members of the Department, demonstrated fog nozzles, the use of large applicators and other devices. A dramatic highlight was the first FIDC appearance of the new Solar Aircraft Company's jet propelled pump.

Thursday morning's session opened with another Question-and-Answer period, conducted by Tom Ward (Calif. State Dept. of Education) ably assisted by Wm. A. Berens (Chief Nebraska Instructor); Byrd Davis (Asst. Chief, Decatur, Ill., F.D.); Wm. C. Freitag (Minn. Und. Insp. Bureau), M. E. McBride (Chief, Takoma Park, Md., F.D.) and C. A. Williams (Chief, Celanese Corp. of America F.D., Rock Hill, S. C.). This was followed by Norman H. Davis (Underwriters Lab.) with a 5-minute summary of Wednesday's program.

"Fire Safety at Home" was the subject covered by Batt. Chief C. J. Shields (Dayton, Ohio F.D.) using the model house which was publicized in "Life". He was followed by E. A. Treager



At right and left, latest type 500 GPM fog nozzles used to protect exposures during Memphis FDIC demonstrations. Vehicle at right on which nozzle is mounted was built by Memphis Fire Department for salvage and large defense operations.

Fire Chief John Klinck receives from Chairman Dick Vernor an embossed testimonial to the cooperation rendered FDIC by the Memphis Fire Department.

(Lone Star Ordinance) who said that a good industrial fire defense program stresses fire *"prevention"* more than it does *"protection"*.

"Town Hall" was the title of 10-minute talks by Percy Bugbee (N.F.P.A.) and Tom Owens (Maryland U.). Mr. Bugbee told about "Sparky," the successful N.F.P.A. dog creation and Owens discussed rescue practices.

Fred J. Wells (Chief, Fargo, N. D., F.D.) presented an outstanding paper on "Preplanned Salvage," urging that fire fighters know more about buildings and occupancies before they are called to fight fires in them. He was followed by John Gerletti (Gen. Mgr. I.A.F.C.) who urged more attention be given training for fire department administration.

At the luncheon, Leonard C. Lund (Minn. Deputy Ins. Commissioner) introduced the speaker, Dr. J. O. Christianson (University of Minn.), who delivered an inspirational message. The Minneapolis F.D. Quartette again thrilled the diners.

This seemed like "Minneapolis Day" because after luncheon, Chief R. C. Malmquist (Minneapolis F.D.), with 14 members of his Fire Prevention Bureau, aided by 8 charming Memphis student nurses, staged a step-by-step dramatized portrayal of hospital fire safety.

As a "warm-up" to the burning tests to follow, Capt. Harry Wolff gave some pertinent observations on water spray, after which busses took "all hands" to the fire ground where the Memphis Fire Department staged a series of demonstrations of the application of water fog on actual fires. Five fires in two frame houses were extinguished before a thrilled crowd.

The final day saw a 5-minute review of preceding day's doings by D. E. Burnett (Florida Fire College) after which members of the Exploratory Committee on Water Spray joined in a discussion of the Thursday's demonstrations. Participating were Messrs: Arnold, Dahlgren, Douglas, Fetters, Kuhlman, Klinck, Scott, and vice-chairman Emmett Cox.

Keeping to the water-fog motif, Chief O. B. Hirst (Galena, Ill., F.D.) led a panel discussion on "Does Water Fog Work When the Chips are Down" in which he was assisted by L. B. Grimes (Chief F.D. Instructor, Columbus, Neb.); E. M. Grass (Chief, Kansas City, F.D.); Bert E. Line (1st Asst. Chief, Topeka, Kans. F.D.); Whit Murphy (State Fire Instructor, Little Rock, Ark.), and P. W. Skelton (Chief F.D. Instructor, Tulsa, Okla.).

Kyle P. Laughlin (FCDA Safety Office, Washington) spoke on wartime rescue, matching funds, etc.; he was followed by Deputy Chief Trenner (Baltimore F.D.), year previous winner of a model ladder truck, who told how he used it in fire prevention. He was followed by John J. Phelan (Ind. & Mich. Elec. Co.) whose subject was "Power Line Hazards."

At the last day's luncheon, Chief Klinck presented officers and committee members of the Fire Department to the conference. The afternoon session opened with a talk on "Pretty Plastics That Make Ugly Fires" by D. L. Bretting (Underwriters Lab.), after which George Gow (Radio Station JANS) discussed radio, with an actual radio broadcast report of the Conference.

The Conference closed with remarks from Chief Klinck and Dick Vernor, and entertainment by the famous FDIC Follies, and the popular M.F.D. String Band and other features.

Aid from "Tic-Tac-Toe"

A battered man shuffled into the quarters of Ladder 2 on W. Washington street, not far from skid row, Chicago.

He handed to Lt. John Howe a cigar box which had been sealed with paper and had a slot cut through the top. On it was lettered "Contributions for the family of Bob Jordon killed in tragedy."

Jordon, a member of Ladder 2, died December 17th in a fire which destroyed the Reliance Hotel, claiming the lives of four other fireman and a resident.

Marshal Robert J. Quinn, who was standing near Howe, asked "Who shall we say its from?"

"Just say it's from Tic-Tac-Toe?" the visitor replied.

The coins and a number of grimy dollar bills added up to $33.00.

Thanks GEORGE WARREN

Montreal Salvage Trucks

During March the Montreal Fire Department took delivery of the last units in a fleet of ten new salvage trucks, replacing all of its salvage company apparatus.

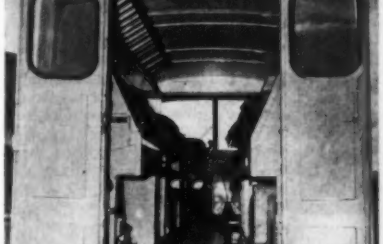
The new trucks are Fargo Route Vans which have been adapted in the Montreal City Shops. Many of the department's nine salvage companies are already equipped with these two-way radio rigs. Each new truck features large rear doors through which the crews can walk, standing up, into the roomy interior, where equipment is stored with maximum accessibility.

Equipment carried by each Montreal Fire Department salvage company includes 70 salvage covers, brooms, mops, squeegees, sponges, sawdust, roofing paper and other of the usual salvage tools. In addition, each has three self-contained breathing masks, an inhalator, a 1500-watt light plant and three floodlights.

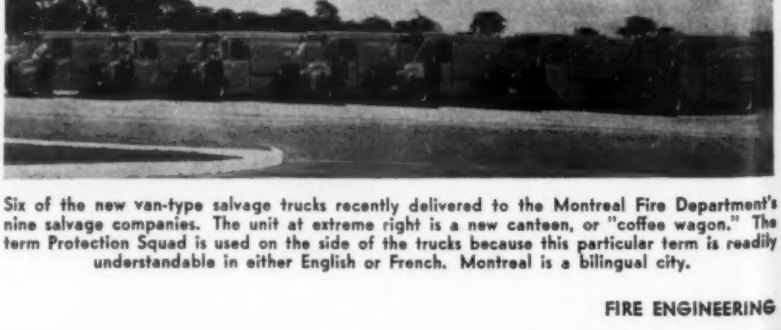
The Montreal department operates at least one salvage company in each district and this responds to every alarm in the district. It carries a salvage crew of four men. After attending to all salvage work necessary, they may assist fire fighting companies as required. On multiple alarms three or more salvage companies respond for special calls. The salvage companies form an integral part of the fire department and are entirely under its control.

In addition to the new truck for each company and a spare, a similar van has been placed in service as a mobile canteen, to be manned by the Montreal Auxiliary Firemen, a buffs' organization.

D. M. BAIRD



View of the interior of one of the new Montreal salvage trucks showing the roomy design and accessibility of equipment.



Six of the new van-type salvage trucks recently delivered to the Montreal Fire Department's nine salvage companies. The unit at extreme right is a new canteen, or "coffee wagon." The term Protection Squad is used on the side of the trucks because this particular term is readily understandable in either English or French. Montreal is a bilingual city.

BRITISH FIRE FIGHTERS, TOO, FACE "GAS" TRANSPORT HAZARDS

Movement of Large Tank Trucks Through Cities and Towns Pose a Fire Protection Problem

By H. LESLIE TAYLOR

SENIOR Fire Service and Home Office officials in Great Britain are as deeply concerned with the problem created by the transportation of highly inflammable liquids and other substances in large capacity road vehicles as are the fire fighters and fire preventionists of the United States.

The recent series of articles on this subject appearing in *Fire Engineering* have been carefully studied by those dealing with the investigation of this problem in the United Kingdom.

An alarming incident involving two large petrol tanker lorries on the night of February 8, 1954, in Hertfordshire, a county on the fringe of Greater London, during an unusually cold period when many roads were icebound, has again spotlighted the danger. Fortunately the incident was not followed by the disaster which could have resulted from the collision.

Nevertheless a state of emergency was declared and lasted for nine hours in the village of Little Hadham where the main road was blocked by the two tankers locked together on the highway.

Both the tankers involved were of 3,500 gallons capacity. One had a full load of aviation gasoline aboard. The other was empty but, having only just discharged its load, its tank was fiilled with petrol fumes and perhaps provided an even greater danger of an explosion.

Immediately after the collision, said to have occurred through one or both of the vehicles skidding as they were passing travelling in opposite directions, police and firemen were summoned from the nearest town, Bishops Stortford.

Almost all of the firemen responding to the first call were part-time retained personnel.

Police at once imposed a ban on smoking and ordered all naked lights to be extinguished in the vicinity of the incident whilst firemen laid out hose lines and sent out a call to county fire brigade headquarters at Hertford, fifteen miles away, for additional supplies of foam equipment to supplement the limited quantity which is carried on all fire fighting appliances.

One of several buildings in the "danger zone" created by the collision was the village inn. Customers were permitted to continue using the inn but they were not allowed to smoke their pipes or cigarettes while they were there.

Meanwhile an S.O.S. was circulated for an empty tanker lorry to be brought to the scene so that the highly inflammable aviation spirits could be transferred to it from the damaged vehicle.

Other firemen, full time crews, were sent from Hertford and Welwyn Garden City to stand by at Little Hadham whilst the transfer of petrol was taking place.

During this operation, and during the subsequent separation of the two tankers which although empty were both fume laden, precautions to prevent the causing of a spark which might touch off the fumes and cause an explosion were taken.

A caterpillar tractor had to be used to drag the tankers apart. To eliminate the danger of friction and sparks as the tired wheels were dragged on the road surface, heavily greased sheets of galvanized iron were placed under the wheels.

Eventually in the early hours of the morning on February 9 the tankers were separated and moved from the scene. "It was a very lucky escape; the incident could easily have resulted in a disaster but, as it turned out, there has been no casualty of any sort," said a Hertsfordshire fire officer afterwards.

Another petrol tanker incident which had a more serious result occurred in Berkshire last year.

Fire Threatens Big Newspaper Plant

Fire in the pressroom of the New York Daily News drove more than 1,000 persons from the modern 36-story building at 220 E. 42nd Street, Manhattan, on Feb. 5th, last. Eight persons were injured, six by smoke; four were hospitalized. Twelve employees trapped on the third floor were rescued in thrilling fashion via aerial ladders, while several thousand persons watched from 41st to 42nd Streets and Second to Third Avenues. Three alarms were sounded in rapid succession, bringing some 26 pieces of fire apparatus.

The fire originated in a section of the 8 ft. by 6 ft. ventilating duct at the third floor level in the 41st Street side of the plant. The carbon dioxide fire extinguishing system in the duct had been temporarily shut off while maintenance men were cleaning out fuzz and other residue that adhere to such ventilating systems.

At about 3:00 P.M., a letter carrier smelled smoke on the 15th floor and when he reached the street he saw black smoke pouring from the third-floor windows on the 41st Street side. At the same time, someone opened a window on the 7th floor City Room and yelled "Turn in an alarm." The carrier ran and pulled the box at 2nd Ave and 41st St.

The first alarm was received at Manhattan Fire Alarm Office at 3:01 from Box 774 which brought Engs. 21, 8, 65, 16; Ladders 2, 7; the Chiefs of the 8th and 9th battalions; and a section of the Fire Patrol.

When Engine 21, the first-due company, arrived from its quarters on E. 40th, only about a block away, heavy smoke was rolling from the building and employees were at windows calling for help. The first units encountered some difficulty getting into action at the rear of the building because of a

Parked cars delay fire fighters getting into operation at New York "News" fire.

Aerial ladder serves effectively in rescuing trapped employees at New York "News" fire.

crowded parking space. Some cars had to be moved before ladder trucks could get to work. Meantime other arriving companies connected hose lines to the standpipe and sprinkler systems on 42nd St. while crews took in lines to fight the fire at close range. A deck pipe was quickly put into operation in the rear to strike at fire which by then was showing through the windows.

The fire, starting in the ventilation system, spread to the roof duct atop the 9-story annex to the main building, and in the pressroom extended to waste paper, ink rollers, benzine-soaked paper and rags, emitting billows of smoke which penetrated the building to the 7th floor, driving out all of the 50 pressroom employees except the 12 who were trapped and removed by firemen.

A second alarm was struck at 3:06 and a third alarm at 3:09.

Response on the various alarms is given below.

Chronology of Response

1st Alarm: Engs. 21-8-65-16; Lads. 2-7; Batt. Chs. 8-9.
2nd Alarm: Engs. 26-1-54-5; Lad. 24; Res. 1; Wat. Tow. 3; Div. Ch. 3.
Relocate: Engs. 260/8-53/65-44/16-40/ 1-15/5; Lads. 16/2-12/24.
3rd Alarm: Engs. 39-2-34-14-23; Lad. 4; Batt. Ch. 7 Gas-Oil Tr.; Amb. 1.
Relocate: Engs. 35/39-56/2-47/23.

Fire Commissioner Edward F. Cavenaugh, Jr.; Fire Chief Peter Loftus; Second Deputy Commissioner Dr. Archer; Assistant Chief Edward Conway, Chief Fire Marshal Martin Scott, and numerous other fire officials were on hand.

The crew of Ladder 2—the first-due ladder company, under Lieutenant Joseph Rohr, ran up their new metal aerial and brought nearly all of the trapped employees down safely. Firefighters took lines to the roof and sprayed water down the ducts, while others donned masks and penetrated into the hot, smoky pressroom to hit the fires and open up the burning ducts.

Meanwhile, faced with possible heavy water damage due to the operation of interior sprinklers and the several hose streams, the Fire Patrol, under Chief Joseph J. Scanlon sent nine units into operation, spreading over 200 covers to protect costly newsprint stocks and printing equipment. Later, Chief Scanlon used five skid pumps to expel water from pits under the presses.

The fire fighters, according to the press, which was right at hand to observe, "did a fast and furious job of extinguishment." The fire was brought under control by 4:00 P.M. and employees began returning at 4:30 P.M.

The Daily News Building contains, in addition to the publishing departments of the paper, the radio and TV departments. With typical newspaper enterprise, the story of the fire was heard immediately on WNEW radio station and WPIX, the Daily News television station; the cameramen getting remarkable shots of fire fighters in action.

The paper temporarily used its Brooklyn plant to get out editions following the fire but was back in business at its main plant within 24 hours. Property damage reportedly exceeded $300,000.

Eight Dead in Resort Fire

The vital importance of early discovery of fire, and its prompt reporting to the fire department, was perhaps never better exemplified than in the blaze which, on February 28th last, roared through the dormitory of the famous Grossinger Hotel, largest resort in the Catskills, near Liberty, Sullivan County, N. Y., to claim eight victims by death, and leave twenty-five injured.

The indirect outcome will doubtless be a more rigid and uncompromising enforcement of the provisions of New York's Mitchell Law among summer resorts.

At the very least, according to Liberty, N. Y., Fire Chief Dewey A. Borden, who is also Sullivan County Fire Coordinator, twenty precious minutes were lost between the time the fire was discovered and the time the alarm was sent to the Liberty Fire Department. That twenty minutes, in all liklihood, cost the lives of eight people. The Liberty fire force, equipped with a 65-foot steel aerial ladder, and with ample additional ladder equipment, was fully capable of removing the victims from the third floor, where most of them were trapped when the flames cut off exists. However, when the Liberty force arrived, seven of the victims were dead and the eighth died shortly after being removed.

Chief Borden and his men do not blame the time-lag upon neglect or negligence, but rather upon the indescribable confusion that invariably follows when untrained adults face a flash fire in the dead of night. Perhaps such confusion cannot be remedied, said Chief Borden, but he believes that an earlier discovery of the fire and corresponding prompt notification of the fire department would have written a different ending to this particular story.

What the fire did demonstate, according to Chief Borden, is the tremendous value of the County's mutual aid radio system. As customary in an out-of-town call, the Liberty Department immediately dispatched one unit, a 750 pumper. When fire officials reached the scene of the fire, a seriousness of the situation was immediately recognized. By means of the radio, with which the pumper was equipped, Chief Borden requested and got all available ambulances in the vicinity of Liberty, together with medical aid. At the same time, and within a minute, according to the Chief, the balance of the Liberty Department had been brought into action. This included

Grossinger fire as it appeared upon arrival of fire fighters.

*The editors acknowledge the assistance of members of the New York Fire Department and correspondent "Jerry" Daly in the preparation of this staff report.

the beforementioned aerial ladder truck. This would have been impossible, according to the Chief, with the old style telephone communications. Chief Borden made contact with other apparatus a mile away, through the radio facilities at his command.

Further aid was called from the hamlet of Loch Sheldrake, six miles distant. To cover up the vacuum left in the Village of Liberty by the withdrawal of its equipment, the Village of Livingston Manor, ten miles away, was asked, by radio to 'cover-in.' It immediately dispatched a pumper, which stood guard in a Liberty fire station. All other departments within reasonable distance of the scene of action were alerted to what was taking place, and could make such dispositions as they believed necessary.

The fire itself was no problem to the firemen. The loss of life had already occured before fire fighters reached the scene, possibly even before they were called. The fire itself was put out within 45 minutes, leaving to the volunteers only the grim task of locating and removing the bodies of the seven who died in the ruins. The eighth, as said, died later of burns and injuries received in leaping from an upper floor.

The fire occurred in a three-story frame staff cottage at the huge hotel, housing some 39 employees at 6:00 A.M. The origin has never been determined. The 27-room building stood at the left of the main entrance roadway leading up a hill to the hotel from Route 17. Although it was only about 150 feet from the huge frame hotel, very few of the 900 guests saw the fire because of the early hour, and its short duration. Among those unaware of what was happening was Rocky Marciano, world's heavyweight boxing champion, whose training camp is on the grounds.

The prompt action of Liberty firemen, aided somewhat by the hotel's emergency fire crew, kept the fire from spreading to any of the exposures in the resort, which covers an area of approximately five square miles and includes theatres, a dance hall, a riding academy, and other features. At its peak season, the hotel accomodates 1,200 persons. During the winter the hotel has about 500 employes.

Ten of the employes had left the staff building for work at the time of the fire and the balance, said to be 55, were not due to go to work for some time. The fire apparently started at the entrance of the building and mushroomed to the top floor before it was discovered. By the time of discovery, exits were cut off, the front one being a wooden fire escape, and many of the employees were forced to jump for safety. Those on the ground floor were able to escape either by jumping or via a back stairway. Panic, however, as pointed out by Chief Borden, apparently contributed to the deaths and injuries.

Some employees were confused over the necessity of having to open two windows—the regular one, and a storm window—and when the latter stuck, as they did, women, rushed at them, and in consequence, many were cut.

Smoke and flames rise from upper floor of staff dormitory at the Grossinger Hotel and Country Club. Fire of undetermined origin claimed seven lives.

After the Grossinger fire had been extinguished.

Hotel Smoker Fined $30-Plus

A Michigan hotel resident, John Melnik, who admitted he carelessly ignited his mattress Feb. 14th, last, in the Michigan Hotel, Benton Harbor, Mich., in violation of a state fire law, was fined $30 and $6.10 costs in Municipal Court.

Fire Chief Maurice Shepherdson of Benton Harbor, filed the complaint. It was the city's second such case in recent months.

Local firemen were called to Melnik's room in the hotel on a Sunday at 4:58 A. M. to extinguish a burning mattress, the ignition of which they blamed on careless smoking.

A Michigan act rules it a misdemeanor for a hotel or lodging-room tenant to carelessly set fire to bedding, curtains, or other furniture and thus endanger lives.

Robeson County Considers Rural Company

Robeson County (N. C.) Commissioners at Lumberton, N. C., have named a committee to perfect plans for a referendum to decide the question of organizing a rural fire company for Robeson County.

The general plan calls for the purchase of up to 10 fire trucks.—D. G. SPENCER.

Hard Luck at 5-Alarmer

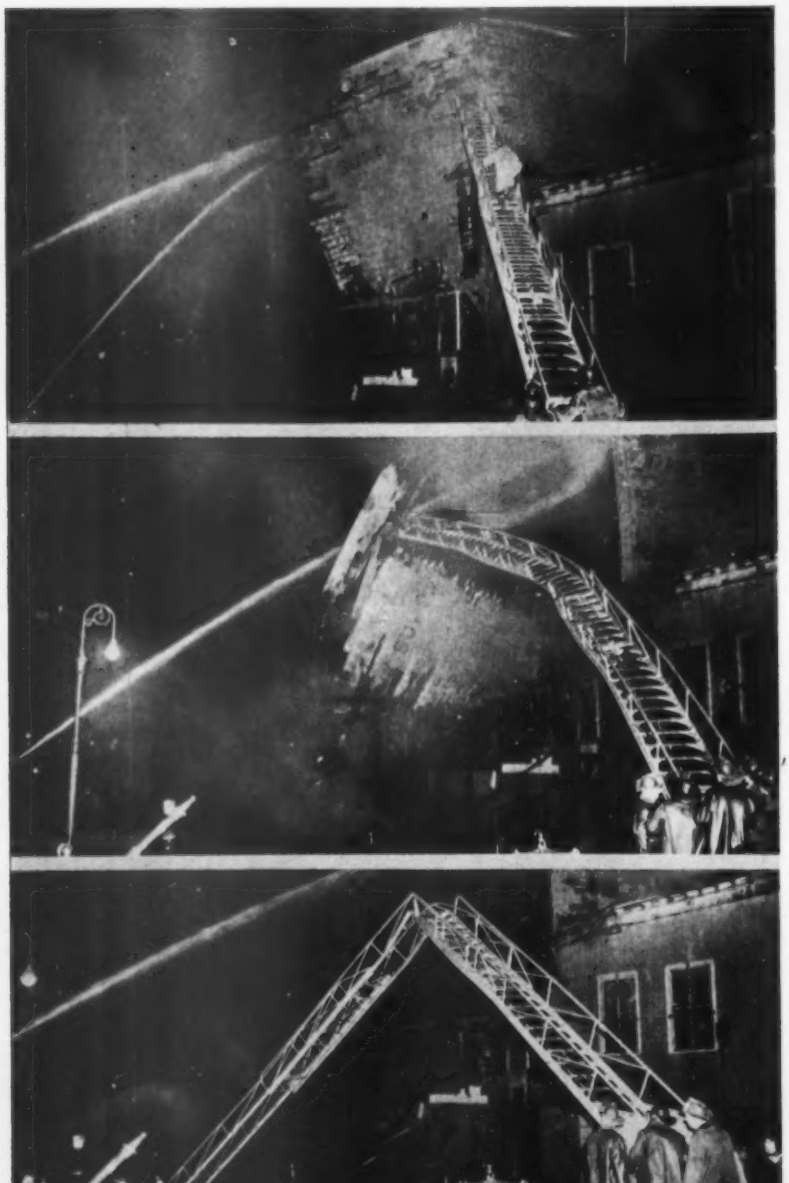
Brooklyn fire fighters encountered plenty of obstacles, and wound up with the hard luck destruction of the ladder sections of a new $28,600 metal aerial ladder, at an early morning 5-alarm fire in an abandoned grain and feed warehouse on the east bank of the Gowanus Canal.

The fire had the usual good start before it was detected and reported by the tender of the Third Street Bridge, who saw flames shooting from the old 3-story building at Second St. and the Canal at 12:45 A.M. March 8th, last.

Fire fighters were handicapped in their response because of repairs being made to the Third St. Bridge, which forced a number of units to detour. To confound things further, the hot blaze, which could be seen over a wide area, touched off about a dozen other fires, when sparks, carried on a high wind, landed in the Cavello Lumber Yard, at Second Street and the Canal; on the third story sill of a building at 230 Third Street and in other nearby structures. Two barges and a tugboat began smoking, but firemen cooled them down before too much damage was done. They likewise doused the other threatening fires.

One of the problems encountered was to get a city fireboat up the choked Canal to the scene and at one time firemen on shore lent a hand, *a la* the old towboat days, to help pull the boat up the stream.

To climax the unhappy occasion, the new metal 85-foot aerial ladder of Ladder 122 was bent double when it was carried down by a wall of the warehouse that gave way. The wall had been hanging precariously, when laddermen attempted to topple it with a push from the extended ladder. The wall came down all right, but with the ladder on the under side of it. A buckled ladder was the result.



Top: Fireman retreats down ladder just prior to its being used to topple wall. Center: The wall is toppled all right, but carries the ladder with it. Bottom: The buckled ladder.

Firemen cut off buckled section with a cutting torch.

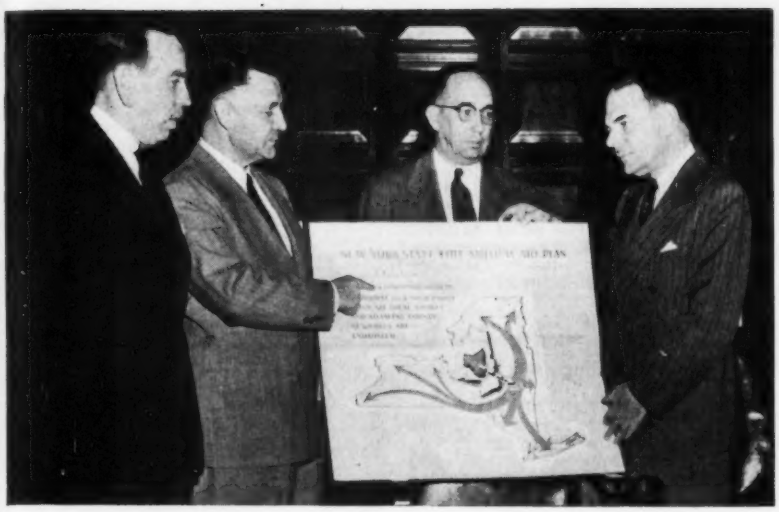
Mecklenburg Volunteers Believe in Training

The Mecklenburg County Volunteer Firemen's Association of North Carolina is a thriving organization that believes in training. According to the "cold figures about hot fires," in 1953 the County's 464 volunteer firemen battled flames which threatened $4,902,105 worth of property. But the fire loss was a relatively small $857,390.

Their work was in rural areas, where water mains are few and far between. Mostly they take water from lakes, ponds, streams, and from their booster tanks or hugh coverted oil tankers which Oakhurst Chief Bob McManus calls "traveling fire plugs." One outfit, the Pinoca Volunteer Fire Department, totes its water in a 1,500 gallon converted beer truck.

Mecklenburg vamps use fog, both high, low velocity. Some of the volunteer's equipment may be of the "home made" variety, but it gets there, and puts the fire out. And it is just a stepping stone to those more elaborate, professional jobs upon which the vamps have their eyes.

Meanwhile they train and drill and study. The new volunteer who serves a 90-day probationary period, is schooled by veterans and by qualified professional instructors. Garmon McCall, who heads the County Association to which members of the 13 qualified departments belong, believes this training accounts for the rural firemen's unusual safety record. During more than 10 years of rural firefighting in the County there have been no firemen killed and none seriously injured. —D. G. Spencer



The New York State Mutual Aid Plan, which can throw all the State's fire forces to the aid of any target city, or disaster area in an emergency, received enthusiastic approval of Governor Thomas E. Dewey, prior to the Coordinator's Conference in Elmira. Shown here are (left to right) Palmer Harcourt, Deputy Director, and Thomas Ryan, Director, State Division of Safety; B. Richter Townend, Chief, Bureau of Fire Mobilization and Control, and Governor Dewey.

Mutual Aid and Training Featured as N. Y. Coordinator's Confer

More than 100 New York State Fire Coordinators, Deputy Coordinators, fire and civil defense top officials, gathered in Elmira, N. Y., March 15, 16 and 17, for the Second Annual Coordinator's Conference, by direction of Governor Thomas E. Dewey. A Canadian delegation was also present.

In New York, training and mutual aid are administered by the Division of Safety, Bureau of Fire Mobilization and Control through County Fire Coordinators. Cooperating is a State Fire Advisory Board and local County Fire Advisory Boards. The State Board, whose chairman is former Jamestown Chief Rudolph Swanson, met during the Coordinator's session. Present at the sessions were Thomas W. Ryan, Director, and Palmer Harcourt, Deputy Director of the Division; B. Richter Townsend, Chief of the Bureau of Fire; and members of the Bureau's staff. Lieutenant General Clarence R. Huebner, Director of State Civil Defense, was also present.

Also among the guests were John Gerletti, general manager of the I.A.F.C., and Chief Charles Fales, president New York State Firemen's Association.

Mayor Emory Strachen and Fire Chief Louis J. Mosher welcomed the guests to Elmira.

During the three-day session, the Coordinators evaluated the state's past and present fire training program, and formulated plans for continuing effort, to include graduate fire training and officer training in single and multiple company operations. The need for further county fire control and training centers received attention. The State's comprehensive mutual aid plans were reviewed, with particular reference to radio communications, in which respect the State has far out-paced all others in the installation of county-wide radio networks. Considerable attention was given to the relation of State and County mutual aid as it affects civil defense and disaster planning.

Those who directed sessions during the three-day Conference, in addition to the Division and Bureau heads, included Dr. Leonard Silvern, Training Director; Lieutenant Donald M. O'Brien; Miss Day; William B. Marx; John H. Danahay; Frances W. Crowley; Timothy Stillman, Field Representatives, and Roswell Pooler, assistant deputy director of the Division. Representing the State, also, were Milton E. Alpert, director, State Retirement System; Charles W. Potter, and Sidney Goetz, counsel for the N. Y. State Civil Defence Commission. Representing the New York City Fire Department and its Civil Defense program was Acting Captain Frank Soracco. The Canadian delegation included Martin S. Hurst, of the Fire Marshal's office, Toronto; Chief Arthur Burch of St. Catherines, Lincoln Co. coordinator and Chief K. R. Putnam, Waterloo Co. coordinator.

Tragedy of a Discarded Match

This little 19-months-old Sherill Morrow of Bridgeport, Conn., shown in the picture below, is being given a drink by Nurse Jean Hunter. It is the pathetic aftermath of a fire on last New Year's morning which sent three generations of the Morrow family to the hospital, with burns on faces and hands, and choked, seared lungs. They all lived—but—

It doesn't matter just how the blaze started in their modest home (firefighters believe that it was due to a discarded match), but it left its bitter imprint on little Sherill, her three-months old brother, Lance; her father, Harwood; her mother Patricia, and her grandmother, Rachel.

Sherill is too young to know just what it is all about—all the pain and agony, the bandages that encase her arms and hands. But when she grows older her mirror will probably remind her of a certain New Year and of the fire which left its scorching imprint on her body, and on her mind.

Sherill probably will never forget the horrors of destructive fire,—if she lives. Nor, perhaps, will her parents—if they survive.

Sherill and her unhappy New Year might well be the subject of the sermons on "How to Grow Up Without Burning Up" which fire fighters—who never get so hardboiled that they fail to grow sick at heart over such tragedies—are preaching throughout the land.

Aftermath of fire at Bridgeport, Conn., last New Year's morning. Nineteen-months-old Sherill Morrow, her face and body severely blistered by flames, is fed at Bridgeport Hospital by Nurse Jean Jeanette Hunter.

News of the Manufacturers

"Audio Hailer" Electronic Megaphone

A new all-electronic self-contained power megaphone has been introduced by Audio Equipment Co., Inc., Great Neck, N.Y. Named "Audio Hailer," it has a wide field of application in fire and other emergency services. It should find use not only on the fire ground, but on

the training ground, parades, and other activities as well.

It is claimed for it that it amplifies the human voice 64 times, over-riding ambient noise and wind, and that feed-back is greatly reduced.

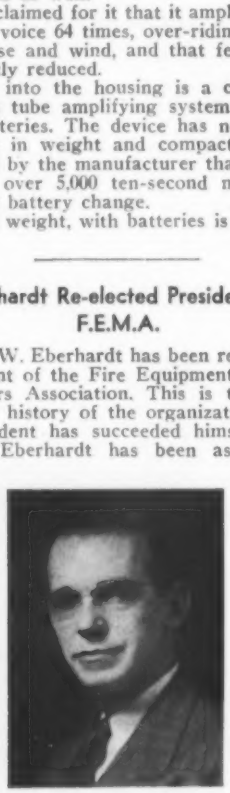
Built into the housing is a complete vacuum tube amplifying system including batteries. The device has no wires, is light in weight and compact. It is claimed by the manufacturer that it will handle over 5,000 ten-second messages without battery change.

Total weight, with batteries is 5½ lbs.

Eberhardt Re-elected President of F.E.M.A.

Paul W. Eberhardt has been re-elected president of the Fire Equipment Manufacturers Association. This is the first time in history of the organization that a president has succeeded himself.

Mr. Eberhardt has been associated



Paul W. Eberhardt

with the industry for twenty-eight years and for the past nine years has served as vice-president of Walter Kidde & Company Inc., Belleville, N.J.

The F.E.M.A., to which 90% of approved fire extinguishing equipment belong, devotes itself to maintaining quality control and establishing standards for the industry.

Automatic Emergency Lighting

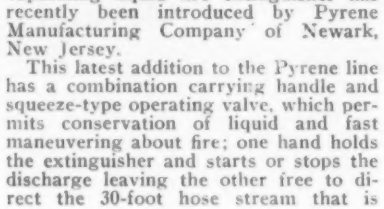
Completely automatic, self-contained automatic emergency lighting systems known as "Light Warden, Chargomatic" are produced by Electric Cord Co., 197 William street, New York 38, N. Y.

The devices provide safety and security against failure of the regular lighting systems. A new development in battery charging is said to eliminate the need for manually operated switches or dials. Rate of charge is adjusted automatically for battery maintenance. The system operates entirely automatically and shuts itself off when regular current is restored.

New 2-Quart VL Extinguisher by Pyrene

A 2-quart capacity stored air pressure vaporizing liquid fire extinguisher has recently been introduced by Pyrene Manufacturing Company of Newark, New Jersey.

This latest addition to the Pyrene line has a combination carrying handle and squeeze-type operating valve, which permits conservation of liquid and fast maneuvering about fire; one hand holds the extinguisher and starts or stops the discharge leaving the other free to direct the 30-foot hose stream that is



New Pyrene 2-quart extinguisher.

effective on Class C (electrical) and Class B (flammable liquid) fires. It is recharged by refilling with extinguisher liquid and pressurizing from a factory, garage or gasoline station air hose.

An outer chamber that holds the liquid is constructed of light weight stainless steel. An inner chamber holds air under pressure. Head and base are bronze painted red. It is equipped with liquid level glass port and air pressure gauge for quick visual inspection.

New Hand Light

Dual-Lite Co., Inc., of 186 Front St., Bridgeport, Ct., has placed on the market a new portable hand light with a nickel cadmium battery rated a life expectancy of 15-20 years or 1,000 cycles (charges and discharges).

Each discharge is rated for eight hours of continuous lighting, representing 8,000 lighting hours.

During discharge, the battery is completely sealed and does not require additions of water during use. The shelf-life of the battery is rated for 80% capacity at the end of one year. Immune to freezing, the handlight may be used or left in sub-zero temperatures without damages. This battery is rechargeable by any ordinary automobile battery charger. The handlight battery weighs 7 ounces.

New Dual-Lite hand light.

Seaberg Leaves Gamewell

Carl M. Seaberg, who has seen continous service with the Gamewell Company for nine years, three months, terminated his connections with the organization on March 2, 1954.

Mr. Seaberg entered the fire alarm field with the Harrington-Seaberg Corp. in 1923 and remained with them until 1931. In 1929 it amalgamated with Gamewell Company, becoming the Eagle Signal Company of Moline, Ill. During this period Mr. Seaberg directed its sales, advertising and engineering.

Mr. Seaberg's future plans have not been disclosed, but it is understood he hopes to remain in the fire service in some capacity.

Buzard to Handle I.H.C. Truck Sales

W. C. Schumacher, vice president, International Harvester, Chicago, Ill., has announced the appointment of Ralph M. Buzard as manager of the company's motor truck sales department.

A native of Ashland, Ohio, Buzard began his Harvester career in 1922 as a salesman at the company's Akron, Ohio, district sales office. After serving in various sales positions at Akron, Canton, Cleveland, and Columbus, Ohio, he was transferred to the company's general office in 1937 as an assistant to the district managers. In 1938 he became assistant manager, central region, and in 1940 he was appointed to a similar position on the company's northwest region. Later that year he was appointed motor truck sales manager of the northwest region.

Ansul Makes Changes

Ansul Chemical Company, Marinette, Wis., announces the appointment of George Brelie as Government Relations Manager, in charge of the sale of all Ansul products to the government.

Mr. Brelie, who formerly was in charge of Ansul's Fire Equipment Sales branch office in Oakland, Calif., has been with the company since 1949.

He will be succeeded in Oakland by Joe Holmes, formerly Los Angeles district manager. Mr. Holmes' place in Los Angeles was assigned to Remsen Paul, who was transferred from Philadelphia.

The company also announced Ed Bader, formerly with Fire Equipment sales in Chicago, will be transferred to New York in charge of contacting national accounts for all products.

McFarland Wetter Water Fire Wagons

McFarland Manufacturing Corp., 1630 Roberts St., Houston, Tex., have announced a line of "Wetter Water Fire Wagons" for every need. They come in capacities from 10 gal. wheel-mounted units to 100-gal. trailer mounted units.

Wet water is stored in the tanks at atmospheric pressure and discharged, as needed, by carbon dioxide cylinder attached to the tank. Pressures reportedly will throw sprays of wet water approximately 40 feet, covering about 35 square feet of area.

Complete information about the McFarland line of wetter water wagons is contained in a colorful folder, available on request.

Pumpers Replace High Pressure

Twenty-five Mack Type 19 special high-pressure pumpers have been delivered to New York City for duty in the high value area of Manhattan below 34th Street, formerly served by two high-pressure pumping stations.

Pumps on these heavy-duty firefighters are four stage centrifugal, arranged for operating in parallel, series or combination of series and parallel. Thus three different ranges are available to handle the capacity and pressure required by the variety of structures in downtown Manhattan.

Drafting from the rivers, these pumps are rated at: 1,000 gpm at 160 psi; 500 gpm at 320 psi; 400 gpm at 400 psi; 250 gpm at 600 psi.

Full advantage of the heavy flows and pressures of the mains can be secured by feeding the pumps through multiple suction lines into the six-inlet suction collectors.

Radio-equipped, these units are powered by the Mack 707 Thermodyne engine, which develops high horsepower at modern engine speeds. 2,000 gpm turret nozzles are direct-connected to pumps. Hose bodies carry both 2½" and 3" hose. Special compartments are provided for life nets and breathing equipment. Fog nozzles, attic and cellar pipes and the latest in fire appliances are among the features of these new Macks.

Mint Hill Firemen Initiated

The Mint Hill, N. C., Volunteer Fire Department, only recently organized in the Charlotte N. C. area, received its baptism of fire March 11th last, when the vamps saved a home and property estimated at $20,000.

Responding to a call from the home of Marley Griffen they found a large tool shed and outbuilding burning when they arrived on the scene. In a two hour battle, they saved the adjoining home. —D. G. S.

N. Y. Fire-Police Group Formed

Over 200 volunteer firemen, serving their home communities as fire police, met in the Suffern Elementary School, Suffern, N. Y., Feb. 27th to form the Volunteer Fire Police Association of the State of New York. Since that meeting, paid-up membership has increased to 600, according to Capt. Wm. Paul Babcock, FIRE ENGINEERING's informant.

Former Fire Chief Charles H. Draudt, of Valley Cottage, and for the past five years President of the Rockland County Fire Police Association, who helped sparkplug the new group, was elected president. Henry Susemehl of Suffern was made first vice president; Ford Griffin of Monroe, second vice president; Ted Feldberg of Monticello, secretary, and Arthur Gifford of Blauvelt, treasurer.

Directors named are: Alben Beatty, New Paltz; W. H. Hampf, Putnam; Arthur Nelson, Monsey; Jack Markowitz, Lynbrook; Wm. Neely, Nassau, and James Curtis of Croton-on-Hudson.

The plan is to divide the state into nine districts with a director elected or appointed for each district. It was voted to file an application for membership in the Firemen's Association of the State of New York.

President Draudt appointed Jerome Kornfeld of Suffern, an attorney, as chairman of the law committee. It is planned to hold sectional meetings during the year.

The meeting was welcomed by Suffern Village Trustee John Williams and Chief Frank Ormstead of the Suffern Fire Department which presented the national colors to the new organization.

Buffalo Fire

(*Continued from page* 310)

intendent of fire alarms, Buffalo Fire Department.

The department's Auxiliary Fire Corps, a Civil Defense unit, also saw plenty of action during the Bison blaze. Approximately 200 auxiliary fire fighters took part directly or indirectly. More than 100 of them helped lay hose and maneuver apparatus, and after midnight they began breaking up wet lines no longer needed and loaded them onto trucks for cartage to the department's central drying tower. Some auxiliaries also manned hose lines.

After the fourth alarm was sounded, auxiliaries who had not reported to the fire were alerted by telephone and asked to report to the Fire Department Center. More than 75 showed up. Although most of these never got to the fire, they helped load fresh hose on reserve apparatus and then were dispatched with regular Fire Department officers and some of the off-duty firemen to vacant firehouses to standby for other blazes. Many auxiliaries remained on duty all night.

Quantity of Water Used

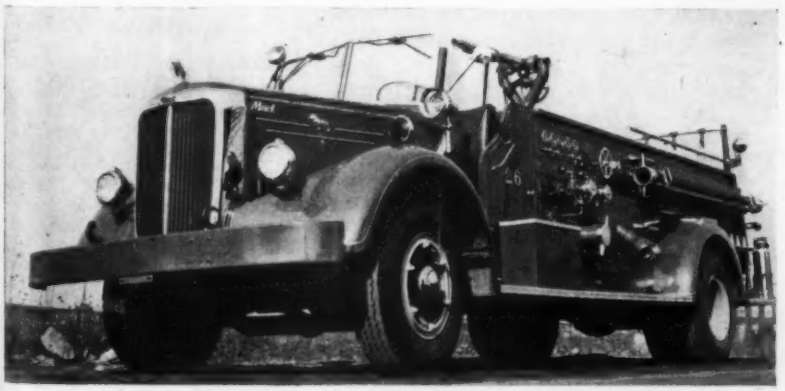
Chief Engineer Frank Nehin, of the Colonel Ward pumping station, said more than three million gallons of water were used at the Bison fire. He said a normal Monday pumpage during winter is 131,000,000 gallons but 134,000,000 were pumped the day of the fire.

The owners and the directors of the Larkin Warehouse, Inc., threatened by the fire, presented a check for $1000 to the Buffalo Fire Department Beneficiary Association in gratitude for the "excellent work" done by Commissioner Halloran and firemen.

Fortunately, there were no other fires during the Bison blaze. Members of the Pine Hill Hose Company, which had occupied Engine 31's quarters under the mutual aid system, took in an alarm at Fillmore and Glenwood shortly after the general was sounded. The alarm was false as was one at Clinton near Michigan at the height of the fire.

Four days later, a three-alarm fire in the D. J. Mead & Sons, Inc., wholesale paper distributors, caused more than $255,000 damage. The building was on the southwest corner of Seneca and Louisana Streets, about six blocks from the Bison plant. Two firemen were injured.

Simultaneous with the paper wholesaler's fire, two alarms were sounded in another part of the city for a fire which damaged three homes to the extent of $40,000. That afternoon a fire in the North Park Garage caused an additional $3750 damage.



One of 25 special high-pressure pumpers recently delivered to the City of New York Fire Department for duty in the high value area of Manhattan below 34th Street.

Short Cuts and Gadgets

VERSATILE RESCUE CRAFT

In its February, 1954, issue, this Journal published a picture and caption describing the drowning of two firemen of the Rochester, Minn., Fire Department in an effort to rescue a 9-year-old boy who had fallen through the ice. The tragedy focussed nationwide attention on the hazards of such rescue operations.

Among the letters which came over the editor's desk, following publication of the story, was one from Carl H. Smith, Chief of the Saranac Lake, N. Y. Fire Department, one fire organization that gets plenty of water workouts, winter and summer.

Chief Smith writes as follows: "I send you a picture of a "Short Cut" but no "gadget." Our truck, which carries our boat at all times, could just as well have been the apparatus that carried the Rochester, Minn., firemen to the scene of the drowning. (If it had, the story might have been different).

"The truck was purchased by us as a panel delivery, second-hand job. The work was done in our own firehouse by one of the drivers with some help from other members and myself. We have invested less than $600 in the truck; that's pretty cheap barter for lives.

"As you can see from the picture, the boat has runners for sliding on the ice. Tied to the inside of the boat are oars, paddle, 100-foot rope and 2 life jackets. It is held on the vehicle by the siren bracket at the front end and two wing-nut clamps at the rear. It measures 12-feet and is built of plywood.

"Also carried on this rescue rig are the following items: 4 sets of grappling irons; floats for marking grapple area and accident area; complete first aid kit—blankets, stretcher, sheets, pillow, rubber sheet and pillow case; bars; ropes; ½, ¾ and 1-inch double sets block and tackle; rubber coats, gloves; 10-foot, 3-section extension ladder; 2 Emerson resuscitators, both duals with 25 ft. of extra tubing; 8 extra tanks of oxygen; smoke and ammonia masks; 1500-watt Homelite generator with two 500-watt floodlights, and a 250-watt spotlight, 300 feet of heavy-duty light cord; coffee-making unit that may be removed from the truck; traction splints, arm and leg, for both adults and children; and other items too numerous to mention.

"Everything the Department requires for emergencies is on this truck, and it can be at the scene of an emergency as quickly as a fire truck. We have made a run of nearly a mile and brought a man from the lake and had the resuscitator on him in 2½ minutes. He lived.

"We, too, went through the stage of working on ice with ladder, ropes, etc., and usually ended up wet. However, we did not have the misfortune that Rochester did. Our truck has been in service for some time, replacing a Cadillac open job. We have four lakes and a river within or adjoining the Corporation and have had many calls. We believe this outfit is definitely a short cut to saving lives. We would be glad to help any other community out in any way, either with pictures or information."

LET THERE BE LIGHT—

A contributor who prefers to remain anonymous, sends this one in. Seems he got the idea from a pump operator who got tired of fishing around in the "bowels" of his fire engine on a dark night trying to juggle a flashlight and still keep his hands free to use a wrench and other tools.

Put a heavy band of rubber, cut from an old bicycle inner-tube, around your wrist, shove the flashlight under it on the inside of the wrist to focus the light past the hand, and thus you can direct the beam of light just where it is wanted, leaving both hands free for the job.

* * *

To extricate fingers, legs or arms imprisoned in gratings, fences, etc., lubricate imprisoned limb with oil. If limb is swollen, it may be necessary to reduce its size with ice packs.
(From WNYF—Submitted by Harry E. Schoener, Lieut. H & L 112)

Rescue truck of Saranac Lake Fire Department, showing rowboat in position.

New Fire Station for Charlotte

A new fire station in Charlotte, N.C., will be built soon, according, to Fire Chief Donald S. Charles, who has outlined his department needs to Charlotte's City Planning Board.

New stations in the southwestern and northwestern sections of the city and expansion of four existing stations should be accomplished within the next four years, according to Chief Charles.

Within ten years, the Chief claims, three other new stations would be needed. In addition, he recommends a new maintenance shop at Station No. 8; additional space at headquarters for offices; a new station in the northwestern section; remodelling of other existing stations, and other improvements.

—D. G. SPENCER

Petersburg Wins National Award

Citizens of the City of Petersburg, Va., and its firefighters are justly elated over the All-American City Award which they received as one of the 11 top honor cities in the 1953 contest sponsored by the National Municipal League and *Look* Magazine.

Petersburg's Mayor Churchill Dunn received award on Feb. 5th from Ed. P. Phillips, regional vice president of the League and Mrs. Jane Douglas of *Look* before a large delegation from Richmond and elsewhere who turned out for the occasion. The Petersburg *Progress-Index* issued a 28-page special edition to mark the event.

This special issue featured the Petersburg Fire Department, headed by Chief J. N. Farmer, who is also Coordinator of Civil Defense, and the 52 volunteers who supplement the "regulars." Also given top billing is the Southside Emergency Crew of 23 volunters, with their $22,000 worth of equipment, including a radio-equipped station wagon.

February Fire Losses

Estimated fire losses in the United States during February amounted to $78,928,000, it was reported by the National Board of Fire Underwriters.

According to Lewis A. Vincent, NBFU's general manager, this $78,928,000 loss represents an increase of 8.6 per cent over losses of $72,706,000 reported for February, 1953, and a decrease of 8.7 per cent over losses of $86,493,000 for last January (1954).

Losses for the first two months of 1954 now total $165,421,000, an increase of 10.7 per cent over the first two months of 1953, when they amounted to $149,365,000.

These estimated insured losses include an allowance for uninsured and unreported losses.

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FALSE ALARMS

Difference

The father was pretty irritated when he called his sons in and demanded to know who had pushed the privy into the river.

"I did, father," spoke up one lad.

"Come to the woodshed," ordered the old man. "I'm going to thrash you good."

"But, father,' pleaded the boy, "George Washington's father did not punish him when he told the truth.

"Yes, I know," growled the irate parent. "But George Washington's father was not sitting in the cherry tree."

A rather inebriated gentleman left the night club, and as he went out the door, saw an elegantly dressed man in a blue uniform with gold braid and all.

Assuming this to be the doorman, the drunk called, "Doorman, get me a cab."

Drawing himself to his full height, the uniformed gentleman replied, "Sir, I am a naval officer."

The drunk blinked, thought a moment, then said, "Well, then, call me a boat. I got to get home."

A Curve

A man had been married for about a year and he had taken to spending his evenings downtown with the boys. One night his conscience worried him so he called his young wife on the phone.

"Hello, darling," he said, "slip on your glad rags and meet me downtown. We'll have dinner at some quiet little place and then we'll see a show. How about it?'

"I'll be delighted to meet you, John," was the reply. "But why not come out to the house and get me? There's nobody home."

As the husband's name was William, he now spends his evenings at home and his wife wears a wise smile.

Professional Acquaintance

The post surgeon was walking along the street with his wife when a blonde in a vivid red creation called out gayly, "Why hello, Doc?"

The medic nodded stiffly and walked on. His spouse eyed him narrowly. "And just where," she demanded, "did you meet that person, my dear?"

"Oh," said the doctor, "that was just a young woman I met professionally."

"Um-m," breathed his wife. "Yours or hers?"

Accommodating

During a spring flood on the Arkansas River a radio appeal was sent out to obtain lodging for some refugees, at least for one night.

One of our neighbors, a widow, answered the call by driving down to look the situation over. She wanted to help but was particular about whom she brought into her home. Seeing an old man and woman standing near each other on the edge of the crowd, she went over and asked if they would be interested in a place to spend the night. They both answered in the affirmative.

Putting them in the car she hurried home, fed them, and hustled them off to the guest room. As she left the room she admonished them to be sure and let her know if there was anything they wanted.

A little later the old woman came down the stairs and asked for an aspirin. As she started back up the stairs she seemed to hesitate. The hostess asked if there was something else. Finally, the old lady turned to her and said:

"If it ain't asking to much, I'd like to know who that old coot is that I'm expected to sleep with tonight."

Signs

A young family was touring the Southwest, and soon they crossed the Texas border. They were shocked at the road signs they saw, which were: "Beware of Soft Shoulders," "Sharp Curves Ahead," "Five Gals, for a Dollar," "Try Ethyl," and finally, "Look Out for Children."

A tourist trying to have a game with the "natives," pointed to a tall telegraph pole and asked a man nearby, "I say, can you tell me what kind of fruit grows on that tree?"

At once the reply flashed back: "Yes, indeed—electric currents?"

A young man was being examined by a psychiatrist to see if he was mentally fit to join the army:

"Do you ever hear voices and not know who is speaking or where the sounds are coming from?" asked the doctor.

"Why, yes, often," said the young man.

"Ah." said the psychiatrist, leaning forward in his chair. "When does this happen?"

"Practically every time I answer the telephone."

A young surgeon received a telephone call from a colleague who invited him to make a fourth at bridge.

"Do you have to go out, dear?" his wife asked suspiciously.

"I'm afraid so," was the brave reply. "It's a very important case. There are three doctors there already."

Wife (after receiving skunk fur coat from her husband): "I don't see how such a nice coat can come from such a foul-smelling beast."

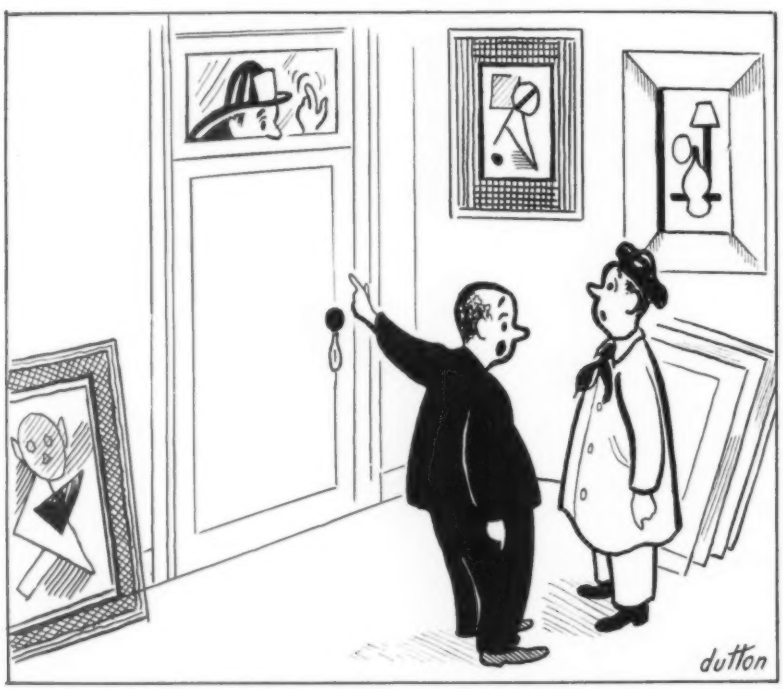
Husband: "I don't mind not being thanked, but I do ask for a little respect."

The Scotsman has just had a very embarrassing experience. He would have sworn the sign on that door said "Laddies."

He who takes a second wife—gets a brand new leash on life.

Sign in a machine shop: "Girls, if your sweater is too large for you, look out for the machines; if you are too large for your sweater look out for the machinists."

The first time I kissed Minnie,
I'll never forget.
She forgot to remove
Her live cigarette.



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Eureka MULTIPLE-WOVEN hose is circular-woven on special Eureka looms so that all plies are *interwoven* into a homogeneous jacket. There's no room between plies for water or dirt to collect, as in loose-jacketed hose. Balanced weaving and controlled curing eliminate excessive writhing and warping, making it safer to handle on ladders. Its smooth-interior filler ply reduces hydraulic friction, assures maximum nozzle pressure.

Eureka makes and sells all grades of fire hose. But, for true long-range economy—the economy of quality—we recommend you invest your future hose appropriations in dependable, long lasting Eureka MULTIPLE-WOVEN. There's no other hose like it!

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195 Hudson Street • New York, 13, New York • *Division of United States Rubber Company*

Study of Large Scale Fires to Be Undertaken

Field tests for "Operation Firestop" will be held at the United States Marine base Camp Pendleton, Calif., in July.

"Firestop" is a one-year operational study designed to explore certain aspects of mass-fire buildup and behavior and to provide the fire services with some new aids to mass-fire prevention and control.

The whole operation is based on the fact that mass fire in urban or wildland areas cannot be controlled with existing fire control methods.

Eleven municipal, county, state, and federal agencies are cooperating in the precedent-shattering tests at the big Marine base near Oceanside.

Cooperating agencies include Los Angeles County Fire Department, L. A. City Fire Department; U. S. Forest Service, California Region; University of California School of Forestry, Federal Civil Defense Administration, California Office of Civilian Defense, U. S. Weather Bureau, California Forest and Range Experiment Station, Forest Service Equipment Development Center, Arcadia; and Marine Corps, Camp Pendelton.

Manager of the operation is Professor Keith Arnold of the University of California School of Forestry.

Executive committee members directing the operation include Harold Bowhay, Chief of Fire Service, California OCD; Chief Keith E. Klinger, L. A. County Fire Department; Chief J. H. McLendon, Federal Civil Defense Administration representative; M. M. Nelson, Forest Service Regional Fire Control Officer; and Dep. Chief F. H. Rothermel, L. A. City Fire Department.

Here are a few excerpts from Progress Report No. 1 of "Firestop."

"Operation FIRESTOP is a cooperative program of those agencies in California which are concerned with the control of large fires. Over 95% of all fires in the wildland areas of the state are handled and controlled satisfactorily with equipment and techniques which have been developed through many years of field experience. A small percentage, however, develop into large fires with which existing equipment and techniques cannot cope.

"These areas of mass fire can rapidly devastate thousands of acres of valuable timber or watershed and causes losses of many millions of dollars annually.

"Most of the agencies involved will contribute equipment, facilities, and highly trained personnel to the project. Present plans include the setting of a large number of mass fires and small fires which have the potential of becoming mass fires. Various new techniques and equipment will be tried on them to determine the best methods of coping with mass fire while in the raging inferno stage and with the small fire to prevent it from developing into that stage.

"These fires will be set in an assigned area of the Marine Base at Camp Pendleton, San Diego County, in conjunction with the control burning program carried out each year by the Marines to remove inflammable vegetation from the firing range areas."

Many "tools" will be used in the experiments. Among those to be tried are aerial water bombing and sprays from conventional aircraft and helicopters, aerial backfiring from predetermined control lines, the use of fog barriers and smoke barriers to slow fire spreads, chemicals and sprays to retard the fire, the use of backfire to turn or slow down running fire fronts.

An investigation also will be made into methods of speeding up fires or setting large numbers of fires over a vast area with the use of a simultaneous ignitor cord. Officials of the project pointed out it is often as important to set fires or speed them up in order to bring them out to control lines that may be permanently held as it is to stop or slow them down.

Already a number of private concerns have offered their products to be tested or their services to assist with the tests. These include chemical and aircraft companies.

All are being encouraged to participate in any way they can.

As the experiments progress during the current fire season, any results which show promise will be made immediately available to field personnel of all agencies so that they can use them at once if needed.

Another important point is that "Firestop" is designed as a completely mobile operation capable of moving intact to the location of an actual wild fire if necessary and utilizing its experimental techniques to assist in control.

Many hours have been spent by personnel from the various agencies involved in meetings to plan the important field work for the project. Weather Bureau surveys have been underway for the past several months.

A complete photographic record—both still and motion pictures—will be made of the "Firestop" field work.

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for DISASTER, for DEFENSE

With a distinguished record of use by the medical services of the Armed Forces, by other governmental agencies, by hospitals, by emergency and disaster units, by industrial clinics and first-aid stations . . .

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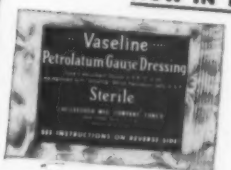

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CONTENTS

Choosing Rescue Personnel
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Stoppage of Breathing
Serious Burns
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Personal Protection

In response to numerous requests, we are happy to present in this handy book form the outstanding series of articles by Joe Mahaffey of the Los Angeles County Fire Department, which appeared in FIRE ENGINEERING during 1952 and 1953 under the heading of "Practical Fire Service Rescue."

Designed to serve as instructional material for firemen, particularly those attached to rescue squads, it is a gold-mine of practical, up-to-date, "how-to-do-it" information covering all phases of fire service activities relating to the saving of human life—first aid, manual and mechanical administration of artificial respiration, transportation of injured, use and care of rescue equipment, and rescue operations in general.

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The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

HYDRANT PURCHASE, REPAIR AND MAINTENANCE

THE problems considered in this Round Table deal with fire hydrants and cover a number of subjects upon which there has been some difference of opinion.

The questions asked, and the summary of responses to date, follow:

1. Have you been able to limit the use of fire hydrants in your city to the fire departments only?

Answer: Seven respondents answer "yes" and 76 "no."

2. If not, what other city departments commonly use the fire hydrants?

Answer: Hydrants are used by the street departments, public works, etc.

3. If other than municipal departments use the fire hydrants who are they?

Answer: For the most part, contractors. However, 40 respondents said no others use fire hydrants, and 27 said others did.

4. Who purchases the fire hydrants: (a) the Water Department; (b) the Fire Department?

Answer: Few fire departments apparently buy fire hydrants. Of those answering this question 74 indicated the Water Departments did the purchasing and only nine reported that the Fire Department did.

5. Who maintains the fire hydrants?

Answer: Water Department, 68; Fire Department, nine; both, two.

6. If repairs are required, who makes them?

Answer: Water Department, 75; Fire Department, four; both, four.

7. Who determines where fire hydrants are to be placed?

Answer: Fire Department, 44; Water Department, nine; both 29.

8. Who inspects fire hydrants?

Answer: Water Department, 45; Fire Department, 18; both, 20.

John H. Alderson, Chief Engineer, Los Angeles, Cal.: We have not been able to limit the use of fire hydrants in Los Angeles to the Fire Department only.

The Board of Public Works uses an angle valve on top of hydrants for filling street sweepers, street washings, etc. Any other city department where angle valves on top of hydrants are not available, is required to use Eddy valves.

Anyone can use a fire hydrant of the Los Angeles system by first obtaining a permit from the Water Department. Hydrants are generally used by contractors for back fills, etc. However, the Water Department places an Eddy valve on the hydrant which is then opened for their use through this valve. In this manner the hydrant valve is never used, making it available for fire fighting purposes at all times.

The Fire Department, with the exception of hydrants for subdivisions, purchases the fire hydrants out of the General Funds of the city, said hydrants and mains then being placed on the capital investment of the Water Department who are responsible for all repairs and replacements. In the case of hydrants on subdivisions, the subdividers assume all costs for the purchase and installation of fire hydrants and mains.

The Fire Department tests and paints fire hydrants periodically. All

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repairs are the responsibility of the Water Department.

The Hydrant Office of the Fire Department determines all fire hydrant locations, whether purchased by city funds or subdivisions.

Both the Water Department and the Fire Department inspect hydrants. The Water Department has a perpetual repair program on all fire hydrants. All fire hydrants on the city system are wet barrel type, generally with bolted assembly.

Zephrin F. Drouin, Chief, Lewiston, Me.: To some extent, fire hydrants are limited to fire department use. They are, however, used by the Recreation Department of the city for flooding skating rinks in the winter. Permission for this use is granted by the Water Division.

Street and Highway Departments use the hydrants in cleaning streets.

HERE ARE THE QUESTIONS

1. **Have you been able to limit the use of fire hydrants in your city to the fire department only?**
2. **If not, what other city departments commonly use the fire hydrants?**
3. **If other than municipal departments use the fire hydrants, who are they?**
4. **Who purchases the fire hydrants: (a) the water department, (b) the fire department?**
5. **Who maintains fire hydrants?**
6. **If repairs are required, who makes them?**
7. **Who determines where fire hydrants are to be placed?**
8. **Who inspects fire hydrants?**

During dry spells, the Chief of the Fire Department does grant farmers the use of hydrants to fill tank trucks to refill dried up wells for cattle.

The Water Department purchases the hydrants. It also is supposed to maintain the hydrants, but due to budget cutting by the Finance Board, only absolutely necessary maintenance work is carried out. Our hydrants are in great need of repainting according to their pressures, should be cleaned and lubricated and at least tested twice a year and after use.

The determination of where hydrants are to be placed should, in my estimation, be the province of the Fire Department, but such is not the case here. Frequently the recommendations of the Fire Department are ignored in requesting additional hydrants in the heart of the city and in new building areas. These areas are frequently in great need of fire protection by water supply, but due to the inadequate water mains installed, such areas will be incapacitated for some time to come.

Both the Water Division and the Fire Department make periodic checks on hydrants. Whenever the Fire Department finds a hydrant out

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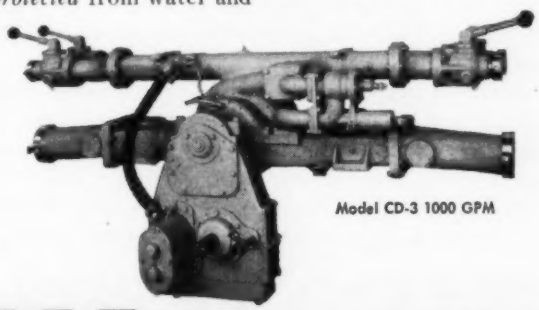

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of order, it reports this fact to the water Division for immediate repairs.

C. M. Johnson, Chief, Knoxville, Tenn.: The Fire Department has not been able to limit the use of fire hydrants to itself alone. The Service Department of the City, which has charge of cleaning and washing the streets, uses the hydrants to fill their tanks and connect hose to flush the streets, etc. We do, however, limit the use of the hydrants to municipal departments only.

The hydrants are purchased, maintained and repaired by the Water Department.

The Fire Department selects the locations for new fire hydrants which are installed by the Water Department.

The Water Department also makes regular annual inspections of the hydrants.

Glenn Smith, Chief, Lubbock, Tex.: The use of fire hydrants in the City of Lubbock has been limited very closely to the Fire Department. However, the municipal Street and Sewer Department occasionally uses the hydrants for a short period of time. The use of fire hydrants by paving contractors has been practically eliminated by the installation of municipally owned loading racks, which are metered.

Fire hydrants in the City of Lubbock are purchased by the Water Department and are maintained and repaired by this department. The spacing and location of fire hydrants is determined by the City Engineering Department.

Fire hydrants are inspected by the Water Department, which has a full time repair crew, and by the Fire Department at regular intervals, both departments conducting annual flow tests.

It is my opinion that fire hydrants should be restricted to fire department use only.

William S. McFadden, Chief, Wheeling, W. Va.: The Water Department is a municipally owned department, operating under a separate budget according to the rules of the Public Service Commission of the State of West Virginia. This department supplies, repairs, and maintains all fire hydrants. There is no direct charge for this service.

There is a charge for the water used to extinguish fires and the usage is an approximation of 1,000 gallons in each instance, calculated from fire reports.

The Water and Street Departments use the hydrants for street cleaning, flushing sewers, etc.

The Fire Department inspects all hydrants for drainage, bad threads, or other damage, which is immediately reported to the Water Department.

The Chief of the Fire Department has the sole authority for placing new hydrants, relocating when necessary.

Repairs to hydrants are rapidly made. Reporting of hydrants in and out of service is made promtly. Water Department servicemen report on all fires in congested areas, and multi-alarm fires. Cooperation between the Fire and Water Departments is good.

Joseph Waterman, Chief, Toronto, Ont.: All hydrants are owned and maintained by the Water Works Department. The Fire Department pays them $20.00 a year for each hydrant.

The hydrants are used by the Sewer Department for flushing sewers, the Street Cleaning Department for filling flushers, etc. Contractors, builders, etc., apply for permits to the Water Works Department for the use of domestic hydrants.

Toronto has a high pressure water system and these hydrants are for fire only. They are located in the high value district and are also maintained by the Water Works Department. The Fire Department's annual cost for maintenance of the high pressure water system is $58,756.00.

Edward G. Duball, Chief, Burlington, Vt.: We have been able to limit the use of fire hydrants to the Fire and Water Departments only.

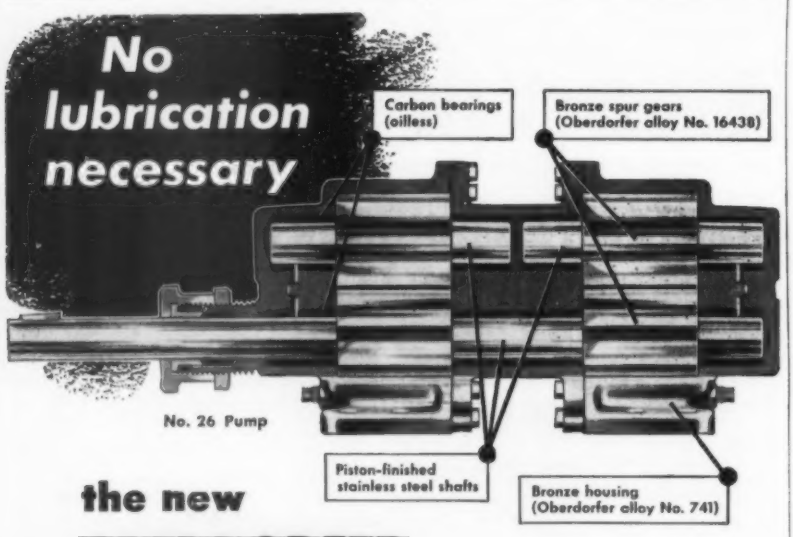
The Water Department purchases, maintains, repairs and inspects hydrants. The Superintendent of the Water Department and the Fire Chief determine where the hydrants are to be placed.

Edward J. Blohm, Chief, Detroit, Mich.: We have not been able to limit the use of fire hydrants to the Fire Department. They are used by the Departments of Public Works, Parks & Recreation, Public Lighting, Water Supply and Street Railways.

All contractors may use them upon application for permit covered by deposit by applicant. All public utilities are allowed to use them, under agreement renewed annually.

The Hydrant Division of the Water Department through the Department of Purchases and Supplies purchases hydrants on requisition. They maintain and repair them.

The Board of Fire Commissioners determine where fire hydrants are to


No. 26 Pump
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PERFORMANCE DATA—No. 26 and No. 13 PUMPS

Pump No.	Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
26	1600	120	500'—1½"	20'	150
13	1600	120	500'—1½"	20'	75

FIRE PUMP DIVISION, Oberdorfer Foundries, Inc., Syracuse, N. Y.

be placed, upon recommendation of its Supervisor of Water.

Members of the Firefighting Division are detailed to inspect fire hydrants.

The Hydrant Division of the Water Department installs and relocates hydrants upon authorization from the Fire Department and performs all the maintainance work, for which the Board of Fire Commissioners is billed quarterly for all the expenses involved.

G. F. Nalley, Chief, Little Rock, Ark.: It has been the customary practice for the Street and Sewer Departments to use the fire hydrants for their respective duties.

The Municipal Water Department has permitted various building contractors from time to time to use the facilities of the Water Department for building purposes.

All fire hydrants are purchased, maintained and repaired by the Water Department.

Insofar as placing hydrants is concerned, the Fire Chief makes his recommendations to the Manager of the Water Department which are accepted.

General inspections are made by employees of the Water Department, but in the various districts of the Fire Department, members of said department in "walking their respective districts" report any defects or damages to the Water Department for corrections.

The Little Rock Municipal Water Works is controlled by a Board of Water Commissioners empowered to manage its affairs.

F. J. Wells, Chief, Fargo, N. D.: The Street Department commonly uses our fire hydrants to wash streets.

The Water Department purchases, maintains and repairs hydrants. The Public Works Department upon the recommendation of the Fire Department determines where new hydrants to be placed. The Water Department makes inspections.

I believe we have a very nice and workable arrangement. I do not know of anything I could really ask for insofar as improvement is concerned.

Edward Grenfell, Chief, Portland, Ore.: The Street, Water and Sewer Departments commonly use fire hydrants, but any municipal department may use them by obtaining permission.

The hydrants are purchased by the Water Department, but the Fire Department maintains, repairs, inspects and determines where they are to be placed.

E. C. Eller, Captain and Secretary to Chief, North Little Rock, Ark.: North Little Rock has no municipally owned water system. The hydrants are purchased by the Water Company and rented to the city.

We have not been able to limit the use of hydrants to the Fire Department. They are used by the Street Department for street sweepers and by the Sewer Department for flushing sewers.

The Water Company maintains, and repairs hydrants. By ordinance, the Fire Chief determines where they are to be placed.

Both the Fire Department and Water Company inspect hydrants. The Fire Department makes periodic checks for pressure and notifies the Water Company if any repairs are needed.

You should own a handsome MINIATURE Fire Fighter's Badge

Whether you are a "Regular" or a "Volunteer" a miniature badge is a must for off-duty recognition. Carry your miniature with pride, it's a small token of your contribution to your community.

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Most of the popular miniature styles are also available in regulation size badges. Miniatures have solid backs.

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ATTLEBORO FALLS, MASS.

Among the Buffs

By Paul C. Ditzel

There's a legend among the students of classical music that Haydn composed a symphony which intentionally included a passage designed to awaken a possibly slumbering concert hall audience. The composition came to be called his "Surprise" Symphony.

Not long ago, I borrowed this idea from the great master and wondered in a column over the meaning of the Hoop and Hammer Association's club title.

The results of that gentle prod have been rather interesting. Up to and including this morning, this column has been deluged with explanations pouring in from coast-to-coast. So I guess there are still a few loyal readers of this column. All of the explanations of the meaning of the "hoop and hammer" were similar, but the one surprising thing of it all—not one word of explanation from the concerned Hoop and Hammer Association of Hillside, N. J.!

Ced. Rowntree, president of the Berkeley Firemen's Association, 1515 Francisco St., Berkeley 3, Calif., sends along one of the most comprehensive descriptions:

"On a street corner, in two or three parts of town, was suspended a steel tire from a wagon wheel. This was the "hoop" and beside it hung a "hammer" about the size of a small sledge," Rowntree writes.

"When a fire was discovered and no telephone was available, the person wishing to turn in the alarm would hammer the hoop loud and long. This would bring out the volunteers and their rig. It is surprising what a racket this could make."

Robert S. Fuller, 300 Riveredge Rd., Tenafly, N. J., adds that he believes such setups were used in the late 1800s and early 1900s.

"Usually the hoop was to be struck a certain number of times, thus giving the location of the fire. Many can still be seen in this area."

A similar explanation is offered by Perry O. Popp, 932 Monroe Ave., Rochester 20, N. Y.:

"Many years back when a town was fortunate enough to boast of a fire department but unable to afford a big alarm system, it was general practice to secure the rim of an old railroad locomotive drive wheel, suspend it in a frame and clamp a large hammer nearby.

"Upon discovering a fire, a person would proceed to the alarm, grab the hammer and wham the rim until the firemen turned out. Then he'd direct them to the fire. This racket would usually awaken the dead, to say nothing of the firemen and the rest of the town."

Among other letters received on this subject was one from John G. Whidding, 741 N. Kingsley Dr., Los Angeles 29, Calif., a member of the special services division, Los Angeles County Fire Department.

Among callers during the month was John Baker, formerly of the Southboro, Mass., volunteer fire department where he served 10 years. Buff Baker now lives in East Pasadena, Calif., and is hoping to become a member of a Los Angeles area Fire Department.

Donald L. Loeb, 410 Dove St., Dunkirk, N. Y., asks readers of this column for names of British fire service officials. His friend, John J. Oliver, a driver for Engine 1, Dunkirk Fire Department, is leaving soon for a trip through Britain and Europe and would like to visit fire departments in these countries.

Loeb says he recently took a number of pictures at a five-alarm warehouse fire in Buffalo, N. Y., at Exchange and Seneca Sts. He adds that Buffalo firemen "did themselves proud in confining the blaze to the building, especially with exposures so close and weather conditions so bad."

Also from Buffalo-way, comes a letter from Myron N. Hendrick, director of recreation, Niagara Falls, N. Y. Although he didn't send along any street address where he can be reached, it can be assumed that he'd like to hear from buffs and clubs if they write him care of the recreation department, City of Niagara Falls, N. Y.

Buff Hendrick says he's cooperating with members of Local 714, Uniformed Firemen of Niagara Falls in their many activities and is an honorary member of the association.

He says that Chief John Barron asked him to help form an official buffs club in Niagara Falls and that the union has pledged its cooperation.

Hendrick asks for all information concerning objectives, programs, scope and size of membership and degree of cooperation found by other buff clubs around the country.

"I have many ideas myself but want to know what others are doing so that we can all sit down and formulate a

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Write for Bulletin No. 9-FD-11

GORMAN-RUPP PUMPS

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MANSFIELD, OHIO

plan and program that would enable us to provide the best service to the local community," says Buff Hendrick.

That's it again for this month. Hope you'll continue to keep sending along your special requests and anecdotes involving you or your own club members. Write me at 419 Napoleon St., Playa del Rey, Calif.

Manville Fetes Chief Fortier

Fire Chief Henri E. Fortier, president of the New England Association of Fire Chiefs, was honored by over 300 friends and village officials March 6th last, at a dinner and celebration in his home community of Manville, R. I.

The occasion marked the Chief's 25th year as local Fire Marshal. The celebration was held at Manville Community Center, with Laure B. Lussier, Registrar of Motor Vehicles, acting as master of ceremonies. Deputy Chief Gladu was general chairman of festivities.

Speakers included John W. O'Hearn, secretary-treasurer of the New England Association of Fire Chiefs; former Chief Daniel B. Tierney, secretary-treasurer of the International Association of Fire Chiefs; Chief Col. John Sheehan, state fire marshal and superintendent Rhode Island State Police; Chief Frank K. Spencer, president, R. I. Fire Chiefs' Club, and Constant Bissonnette, who presented Chief Fortier gifts of a white fire helmet and raincoat, and red lights and spot light for his car.

N.B.F.U. Advances D. B. Sherwood

The National Board of Fire Underwriters has announced that Donald B. Sherwood, its general adjuster, has been appointed an assistant general manager. In his new capacity he will exercise general supervision over the public relations and loss adjustment activities of the National Board of Fire Underwriters.

Since November 1, 1946, Mr. Sherwood has served as general adjuster of the National Board, dealing with general problems concerning the capital stock fire insurance companies of National Board membership in the field of adjustments.

He has also had general supervision of the National Board's "Catastrophe Plan," under which special offices are set up in disaster areas to facilitate prompt and equitable payments of large numbers of claims. Some of the disasters in which he has put this plan into effect have been the Texas City explosion of 1947, the Florida and Gulf Coast hurricanes of 1947, 1948 and 1949, and the tornadoes that struck Columbus, Ga. and Worcester, Mass., last year.

Bryant Chief in Newburyport

Herbert H. C. Bryant was named chief of the Newburyport, Mass., Fire Department in February. At the same time Benoit W. Richard was named assistant chief.

Bryant, a call fireman since 1923, succeeds Malcom C. Wood who was acting chief following the resignation of former Chief Burton T. Lunt, in January.

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it's made with DACRON! The new, stronger, synthetic fibre load-carrying "filling" cord.

it's 15% LIGHTER! Easier to carry . . . easier to handle. Gets into action faster!

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Persons in the News

N.B.F.U. Announces Changes

Lewis A. Vincent, general manager of the National Board of Fire Underwriters, New York, announced on March 25 that two of the Board's assistant chief engineers, who have devoted a lifetime of service in its employ, are being made consultants and that George J. Robinson, NBFU's senior engineering editor, has been appointed an assistant chief engineer. The two consultants, both equally well-known in fire prevention and fire safety engineering activities, are Robert C. Dennett (of Freeport, N. Y.) and Harry E. Newell (of Bloomfield, N. J.).

Mr. Dennett, who was born in Sabattus, Me., joined the National Board in October, 1904, as a field engineer on water supply. Four years later he was assigned to the National Board's office staff of engineers and in 1945 was made assistant chief engineer, directing the board's surveys on municipal fire protection.

Mr. Newell, who was born in Newark, N. J., joined the National Board in October, 1909. For a number of years he was in municipal survey work and some years later was made an assistant chief engineer, specializing in flammable liquids and gases. He was mayor of Bloomfield, N. J., for four terms, from January 1, 1935 to December 31, 1942.

Mr. Robinson, a native of Gardner, Mass., is a graduate of the public schools there and Worcester Polytechnic Institute, class of 1915. He lives in Laurelton, Long Island. He joined NBFU's staff as a field engineer in 1927. Before that he had been for nine years a field inspector for the Factory Insurance Association.

Mr. Robinson, a lieutenant commander in the Naval Reserve, served as a commissioned officer during the first and second World Wars. During the latter he was district security officer of the 3rd Naval District and early in the war was with Naval Air Intelligence.

Harry Sommers New Newark Chief

Harry J. Sommers, veteran fire-fighter and 36 years a member of the Newark, N. J., Fire Department, has been named Chief Engineer of the organization by John B. Keenan, director of Public Safety. He replaces the late Charles G. Burnett, who died Dec. 12, 1953. The new Chief topped the list for promotion in the recent civil service examination.

Chief Sommers has a high efficiency record in the department. He was appointed in the department April 16, 1917, where he stood 13th in the eligible list of over 300 applicants. He headed the list for captain in 1926 and was appointed to that position in December of that year. Eleven years later he topped the list of candidates for battalion chief and assumed that rank in February, 1937. In 1944 he competed in civil service examinations for deputy chief and drill master, finishing second in the test for deputy and first on the list for drillmaster. He was appointed deputy chief June 1, 1944 and he declined the post of drillmaster. He was notified on January 3rd, 1954, that he had headed the list for Chief Engineer, the appointment effective on January 10th.

The new chief has been active in the state of New Jersey in various firemanship educational work. Until recently, he and Acting Chief Engineer (retired) John J. Wilkinson were chief instructors at the Vale School of Business in Newark, teaching fire promotional classes.

The chief has attended most of the large fires in Newark and he was Acting Chief of Department on July 7th, 1951, and present on a inspection tour with the late Chief Burnett, when the Warren Liquefied Petroleum tank field of over seventy 30,000-gallon tanks caught fire.

Chief Canning Begins 35th Year

Utah's oldest fire chief in point of service, L. C. Canning, is celebrating his 35th year as head of the Midvale Fire Department.

He joined the department as a youngster of 18 and was elected Chief just 17 years later. He is widely known among the nation's fire fighters and manufacturers of apparatus as a result of his several years' chairmanship of the Exhibit Committee of the International Association of Fire Chiefs.

He has seen his department grow from an ancient hose reel to a fully equipped modern organization, with three fire engines and 41 volunteers. Among the apparatus units is an ambulance, which is the pride and joy of the chief. This is maintained as a public service and supported by funds raised at an annual dance.

The chief has served on the Board of Directors of the Pacific Coast Intermountain Association of Fire Chiefs and he has filled all offices of the Utah State Firemen's Association.

Use this fine safety film, "SAFE EXIT," in your safety program at school, plant or club meeting. Dramatically filmed and edited by the makers of VON DUPRIN Fire and Panic Exit Devices, "Safe Exit" is a public service film devoted to the promotion of safety education . . . and offered to you *absolutely free*. It is in no sense a product story.

"SAFE EXIT" is a 20-minute, 16 mm, black and white sound movie, ideal for use in any safety training program for children or adults or for informal luncheon club or PTA meetings.

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Burke Becomes Hotel Consultant

Harold J. Burke, former chief of department of the New York City Fire Department, with 25 years fire fighting experience, has been appointed Fire Prevention Consultant for the New York State Hotel Association, to succeed the late Chief John J. McCarthy, according to a joint announcement just released by Frank W. Kridel and Merton A. Johnson, respective chairman of the Fire Prevention Committees of the New York City and New York State Hotel Association. Kridel is president of the Martinique and Concourse Plaza Hotels of New York City, and Johnson is the operator of the Governor Fenton and Jamestown Hotels, in Jamestown, N. Y.

In addition to his service with the N.Y.C. Fire Department, Chief Burke was called to Washington during World War II to perfect and direct fire prevention techniques aboard the U. S. Navy's fighting ships. He served with distinction throughout the war with rank of Captain, and for his outstanding achievements in fire-safety work was awarded the Legion of Merit, and he received official letters of commendation from Admirals commanding four of the fleets.

Chief Burke will be available to all Association members in the city and state of New York for counsel and advice on fire protection techniques for their hotels.

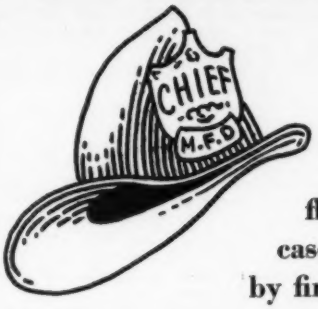
The New York State Hotel Association represents some 500 hotels in New York City and upstate with a total of 120,000 rooms, the largest state group of hotels in the nation.

Harold J. Burke

In commenting on the appointment of Chief Burke, Kridel, who is a nationally recognized authority on fire prevention said, "The hotels in this state have spent hundreds of thousands of dollars to put their properties in compliance with the Mitchell Law which sets up the hotel fire-safety code for New York State.

"Without a doubt the fire-safety regulations in our hotels are basically among the highest in the nation, and we are well aware of the fact that effective fire prevention is an absolute essential in the successful operation of our properties.

"We are indeed happy to welcome Chief Burke into our organization because we feel confident that he will be able to make a major contribution to the fire-safety in our industry just as he did for the City of New York and for the U. S. Navy during World War II."



Chief—

Again and again news flashes describe the many cases of suffocation suffered by fire department men.

Where modern combative measures were not taken immediately, death has resulted — a Stephenson Resuscitator used at once would have saved the majority.

Leading fire departments throughout the country have learned from experience that the Stephenson Resuscitators are the most efficient, simplest to operate and do the most for patient.

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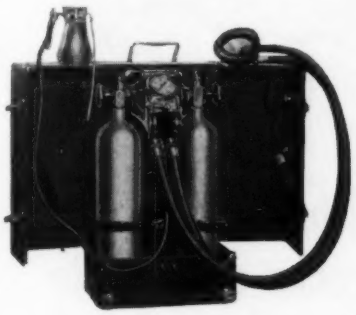

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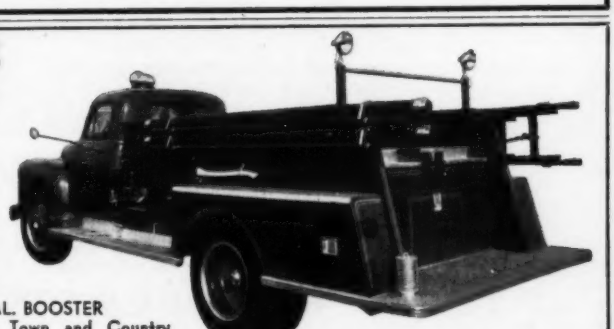

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Chief Oliver T. Sanborn Retires

A career that spanned the days when he fired the boiler of the old Portland, Maine, steamer, to installation of two way radio on most modern motorized apparatus, was honored March 11th at a retirement party for Fire Chief Oliver T. Sanborn.

Over 200 local and out-of-town dignitaries, including heads of the New England and the Maine Fire Chiefs Associations, attended the dinner at the Lafayette Hotel, Portland.

Chief Sanborn joined the department 42 years ago, and he has headed the organization over 30 years. He witnessed the motorization of the force in 1929, five years after his appointment as chief. He established better training methods, including a drill tower; a fire prevention bureau; he added the rescue company, and replaced old out-moded apparatus with modern rigs, including five metal aerial ladders.

The out-going Chief is widely known in fire service circles. He is a member of the International Association of Fire Chiefs, the New England Association of Fire Chiefs, Maine Fire Chiefs Association and numerous other groups. He has served on committees of the International Association, the National Fire Protection Association and other national bodies. He has been a stalwart fixture at the New England Association conferences held annually at Wentworth-by-the-sea.

Although Sanborn will hang up his white helmet, he will merely exchange it for another cap and insignia, when he becomes an inspector of the state fire insurance commissioner's office, and chief deputy in the civil defense agency. He says he expects to be around, fighting fires one way or another, for a long time to come.

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- Old truck body rebuilt and installed on new chassis.
- New bodies of any type or size furnished.
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- Restyling of units into squad cars, rescue vans, pumpers, combination units and various other arrangements.

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Al. Redles, Quaker City Buff, Feted

Albert H. Redles, Secretary and director of Sales of Bachman Bros., Philadelphia, Pa., and Quaker City fire buff extraordinary, was tendered a luncheon at the New York Athletic Club on March 10th by approximately 100 friends and invited guests, including many Fire Department officials.

Chief William Garvin, of Yonkers (left), presents miniature helmet to Al Redles.

Master of Ceremonies was Walter J. Gallagher, personal friend and resident of Yonkers, N. Y. To lend atmosphere to the festivities, Fire Chief William C. Garvin of the Yonkers Fire Department presented the honored guest with a scale-model firemen's helmet, carved out of white ivory on a crystal base. On the traditional shield was inscribed, below the customary "Chief" the initials "P. F. D." standing for "Plasticville Fire Department."

When not runing to fires, "Chief" Redles is busy supervising the production of plastic scale-model toys which are among the many products made by his company.

J. G. Hunter Now Chief at Cedar Rapids

Cedar Rapids, Iowa, has a new Fire Chief in the person of Jesse G. Hunter, who was appointed March 18th, 1954.

He became a member of the Department on December 1st, 1938, and served as a fire fighter in the Navy during 1945 and 1946. He was promoted to Captain of the Cedar Rapids Fire Department, September 5th, 1947, and to Assistant Chief on September 1st, 1950.

For rescuing two boys from drowning in the Cedar River in 1947, he received the Carnegie Foundation medal for heroism, and the Governor of the State of Iowa presented him the Iowa State Valor Award, and numerous Cedar Rapids organizations honored him.

He succeeds the late Chief Emil P. Kohout who died in December of 1953.

A young man of 38, Hunter is the youngest Fire Chief in the city's history.

He is a member of the International Association of Fire Fighters, F.&A.M. and Consistory.

Jay Stevens Wins Bout with Pneumonia

Jay W. Stevens, Executive Secretary of the International Association of Fire Chiefs recently recovered from an attack of pneumonia which developed during the trip back to San Francisco from the I. A. F. C. Directors' Meeting in New York.

Chief Stevens, who was taken ill in the air between Portland and San Francisco, was given first aid by the crew of a United Air Lines plane. After ten days' confinement to bed, he reports he is fit again and is hard at work.

Chief R. F. Coley Heads Milford Department

Fire Chief Richard F. Coley, of Milford, Conn., was feted by more than 200 persons at a testimonial dinner in the Fireside Restaurant, Milford, on Feb. 18. Chief Coley recently completed his six-month probationary period and

Fire Chief Richard F. Coley, of the Milford, Conn., Fire Department, who was honored at a testimonial dinner on February 18. In the above photo, left to right, are Superintendent Arthur Harris of the Milford Police Department; Chief Coley, Captain Jack Smith of Engine 3, Myrtle Beach Volunteer Fire Company, and Fire Commissioner Frank Hunter.

took office as Chief of Department, to succeed Retired Chief Ernest I. Cox.

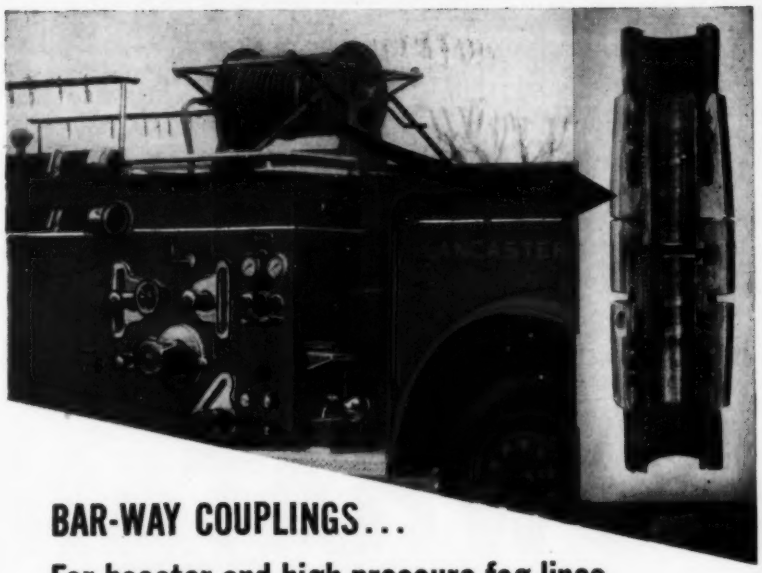
Chief Coley was presented with a wrist watch by Capt. Jack Smith, of Engine 3, Myrtle Beach Volunteer Fire Company, of which Chief Coley was a member for 32 years. Speakers included Town Manager John J. Desmond, Police Supt. Arthur Harris, the Rev. John Ganley, of St. Gabriel's Church, and members of the Milford Board of Fire Commissioners.—TOM MAGNER.

Swanson Heads State Fire Research

Rudolph H. Swanson, Jamestown, N. Y., began his duties as New York State Research Director on April 1st. He will devote his efforts to solving fire protection problems created in 11 "target cities" of the state.

He is former Fire Chief of the Jamestown Fire Department. He served as President of the International Association of Fire Chiefs from 1951-1952, having held all the positions in the Association from directorship to President. In 1948 he was appointed chairman of the New York State Fire Advisory Board, and served in that position until his recent appointment as Research Director.

He was born in Warren, Pa. His present address is at 1618 West Third Street, Apt. 30, in Jamestown.



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Questions and Answers

Extinguishers for Magnesium Fires

To the Editor:

Recently our department was called to a small machine shop which was machining magnesium products. During the process of machining, magnesium shavings caught fire. We have had a great deal of discussion on the best way to extinguish this type of fire.

We would appreciate your telling us the ignition point of magnesium and the safest, fastest and most efficient means of extinguishing it, as well as any danger that might arise during the process of extinguishment.

V. E. D.

Answer: If the fire is small, it is possible that it can be controlled by use of dry sand. The dry sand is thrown over the fire so as to smother it.

Better than dry sand is dry graphite. This is the basis of at least one magnesium fire extinguishing agent.

There are two commercially manufactured extinguishing agents for magnesium fires today. They are Met-L-X and G-1 powder.

The G-1 powder is manufactured by the Pyrene Manufacturing Company, 10 Empire Street, Newark 8, N. J. Met-L-X is manufactured by Ansul Chemical Co., Marinette, Wis.

The ignition temperature of magnesium is 945 degrees F.

There is no particular danger in extinguishing magnesium fires by either of the above methods. On the other hand, if water is used, there may be considerable spattering and even steam explosions, which will scatter the the molten metal.

Use of "Walkie-Talkies"

To the Editor:

We are canvassing the advisability of utilizing Walkie-Talkie sets within our department to improve control at multiple alarm fires.

Our department is completely radio-equipped: chief's cars, boats, apparatus, etc., some fifty units.

Could you supply us with any information relative to fire department experience with the use of this type of equipment?

Are they generally useful and do they warrant the expense involved?

In departments using this equipment, are they tuned to the regular fire department frequency or is a separate wave length used?

What method, if any, is used to alert users' attention, such as loud speakers, buzzer, light, etc.?

H. B.

Answer: During World War II the British, in particular, found the need of reliable wireless communications facilities imperative during the bombing of London. At that time about the only city in this country which was seriously considering portable radio units similar to the "handy-talkie" and "walkie-talkie" outfits in use by the armed forces, was the City of New York. It was built by two members of the department and, a year or two later, representatives of the British Fire Service were sent over to this country to see it.

These home-made portable sets, crude as they were, served admirably at a number of fires, and were of great value at the Empire State Building airplane crash, July 28, 1945.

Later on, the Fire Department's radio laboratory was discontinued and the city experimented with sets manufactured by leading radio manufacturers. The outcome was that when New York had determined to install radio on all its mobile department units, it purchased several "Walkie-Talkie" units and put them to work. The most notable use of these first portables was at the Holland Tunnel blast and fire, May 13, 1949.

This incident disclosed some engineering difficulties, such as interference when the sets were used underground and in certain locations. Since that time New York purchased ten sets and has more

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POSITIVE AND EASY SHUT-OFF UNDER ANY PRESSURE.

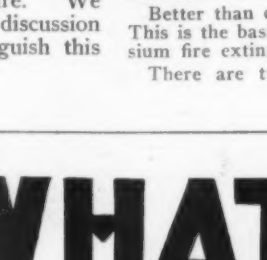

PLATE 175

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MINIMUM UP-KEEP EXPENSE.

SWIVEL SUPPLIED WITH PIN LUGS OR OUR **SENSIBLE LUGS** (ROCKER LUG TYPE).

This is but one item in our vast line of precision tooled, strongly built, brass fire-fighting equipment. Since 1892 our single aim has been—improvement of our products—and repeat orders from Fire Departments all over the United States have proven the value of such a policy.

BE SURE TO CONSULT POWHATAN BEFORE PLACING YOUR NEXT ORDER.

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia
Established 1892

recently ordered further units for each battalion of the city.

Perhaps the best answers to your questions are those which have been advanced by Deputy Chief-in-Charge, Fire Alarm Bureau of the New York Fire Department, Thomas F. O'Brien. He states:

"The New York Fire Department has had in service a limited number of "Walkie-Talkie" radio units carried by Rescue Squads and the Marine Division. At this writing we are receiving 190 of these units, and they will be distributed as follows: 2 units to Chief of Department; 2 units to each Assistant Chief of Department; 2 units to each Deputy Chief in Charge; 2 units to all Deputy and Battalion Chiefs; a complement to each of the Rescue Squads and to the radio field mobile communications units.

"It is our considered opinion that they are extremely useful and warrant the expenditure involved, provided that the members of the Department are properly educated in their use. It will have a major effect on increasing the effectiveness of the operating forces at the scene of a fire or other emergency.

"The desired frequency surely should be determined by the Chief of Department in which the units are to be used; however, in our city we feel that it is highly undesirable and would impair the efficiency of our radio operation if we associated our "Walkie-Talkie" radio units on our regular mobile frequencies. Therefore, we have found it can be used much more effectively by utilizing a specific "Walkie-Talkie" fire service frequency, allocated for this particular function by the Federal Communication Commission in order to eliminate possible interference with base station operation.

"It is suggested that an earpiece, such as is generally associated with a hearing aid, be installed on the receiver side of the unit. This installation would obviate the necessity of the Chief's aide holding the handset to his ear or contriving some sort of sling that would be more or less effective. Through the acquisition of the hearing aid, the Chief's aide is in contact with all intelligence being transmitted concerning the operation, and provides for verification of all messages received and transmissions made."

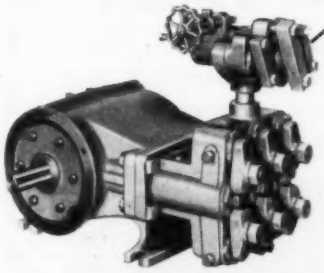
This method of continually "listening in" enables the Chief's aide to alert his superior when a message comes through for the latter.

Further investigation of the use of these instruments discloses that a number of small and large departments are employing them regularly, not merely for multiple alarm fires and serious disasters, but for routine matters. They have application on the drill ground, in making inspections, and numerous other uses as well as in actual fire suppression.

In Pennsylvania, the Bucks County Rescue Squad has had three ambulances equipped with short wave radio and two "Walkie-Talkie" sets, having a range of three miles. The mobile ambulance units take care of the long range communications; the "Walkie-Talkies" handle the communications within the immediate vicinity of the emergency. In this case they are using the same frequency, but as the number of mobile units increases, and the communications "traffic" multiples, it would be better to have the "Walkie-Talkies" on a separate frequency.

HERE'S HOW *Four Wheel Drive* USES

MYERS BULLDOZER PUMPS



A Myers Bulldozer for high pressure lines and a main pump for high-capacity requirements provide FWD pumpers with a potent one-two fire-fighting punch.

Fire chiefs in communities the country over count on Myers fire pumps in equipment built by many leading fire engine manufacturers. Write today for details and a Myers fire pump catalog.

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Oil Reservoir — Filled through pipe plug in bonnet — assures positive lubrication of stem threads.

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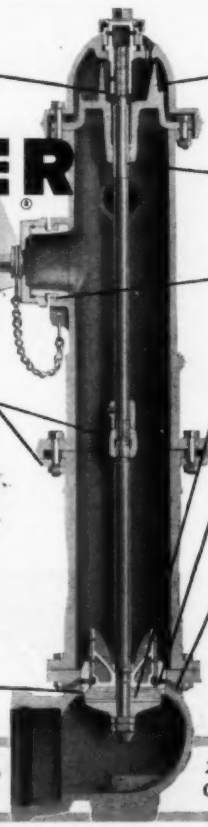

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Breech Locked Nozzles — Interlocking lugs prevent blowout.

Compression-type Main Valve — Closes with water pressure.

Double Drain Valves — Integral part of main valve assembly.

Double Drain Openings — Force flushed each time hydrant is operated.

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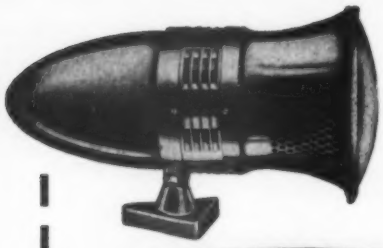

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Siren sounds a penetrating warning, red light automatically flashes authority. Traffic opens instantly, day or night. FREE ROLLING feature.

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Quick acceleration, power-plus . . . Model M really gets the boys out in a hurry! Used by championship companies from coast to coast. A dependable, heavy-duty siren built of the finest materials throughout.

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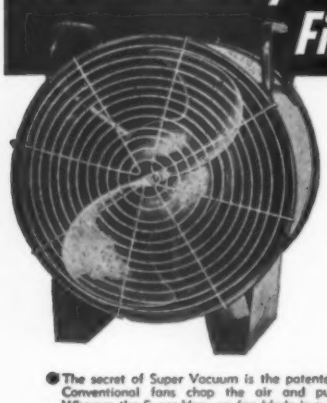
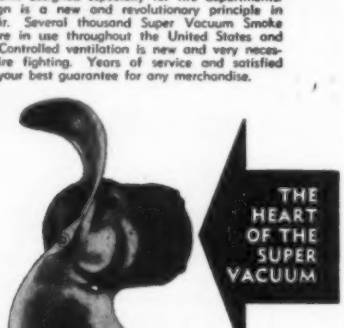


● The Super Vacuum Smoke ejector is a powerful portable fan unit designed especially for fire departments. This design is a new and revolutionary principle in moving air. Several thousand Super Vacuum Smoke ejectors are in use throughout the United States and Canada. Controlled ventilation is new and very necessary in fire fighting. Years of service and satisfied users are your best guarantee for any merchandise.



● The secret of Super Vacuum is the patented fan blade. Conventional fans chop the air and push it back. Whereas the Super Vacuum fan blade is a perfect spiral air screw which creates a partial vacuum, suction is created over the entire face of the blade and the air or smoke is discharged in a high velocity spiral. There are no dead spots—that is why Super Vacuum outperforms other fans twice its size.

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Obituaries

Chief Charles A. Delaney Dead

Charles A. Delaney, for the past 22 years Chief of the Lakewood, Ohio, Fire Department, and former president of the International Association of Fire Chiefs, died March 20th in Lakewood Hospital following a sudden seizure which reportedly developed following a fire.

Apparently in good health, Chief Delaney, who was 59, was on duty until noon March 19th, during which time he operated at a fire. He returned home at noon suffering severe abdominal pains. He was taken to Lakewood Hospital at 3:00 P.M., where several doctors were called. His trouble was diagnosed as a rupture of the aorta and he died at 4:15 P.M. on the 20th.

Charles A. Delaney

Chief Delaney, who was born in Cleveland, was employed by the Pennsylvania Railroad before joining the Lakewood Fire Department in June, 1917. Eleven months later he went to France as an ambulance driver with the 162nd Infantry Regiment.

He rejoined the fire department after his discharge and was promoted to lieutenant in 1920 and to captain in 1926. Skipping the rank of assistant chief, he was named chief Feb. 27, 1932 by Acting Mayor (now Mayor) Amos I. Kauffman, following the death of Chief Joseph H. Speedy.

Under his guidance as head of the Lakewood Department, his city won 13 national fire prevention awards for cities of its population class and two first awards for cities regardless of population.

The Chief's outstanding accomplishments, and his popularity, brought him into national prominence and he held many local, state and national posts in fire service groups. He was president of the International Association of Fire Chiefs in 1946 and presided at the record breaking New York City Conference of that body. At the time of his death he was secretary-treasurer of the Great Lakes Division of the I.A.F.C. and past-president of the Ohio Fire Chiefs Association and a member of the committee

for vocational training of firemen, a state agency. He attended the recent Board of Directors meeting of the I.A.F.C. in New York City, representing the Great Lakes Division. He and his wife Alice were familiar figures at the various Conferences of the Divisions of the International, and at Ohio fire association gatherings.

Surviving, in addition to his wife, is a brother, Cal. Burial services were held March 21st in St. James Catholic Church, Lakewood. Prominent civic and fire officials from a wide area were received at the Charles F. Nunn funeral home, Lakewood where the body lay in state. Assistant Chiefs Jay V. Redmond and Cornelius C. Donnelly are in charge of the department until a successor to Chief Delaney is appointed.

Jaffe, Friend of Firemen, Dead

Meyer Jaffe, clerk to the Paterson, N. J., Fire and Police Commission, and long time, enthusiastic friend of both services, is dead, after 29 years of service to the City of Paterson.

Fire Chief G. Hobart Strathearn and other officials, eulogizing the popular public official said that no man in the city's history had done so much to improve working conditions, salaries and public relations for both the services, as had Meyer Jaffe.

He was given an impressive funeral service, attended by a record number of local and out-of-town dignitaries.

Former Newburyport Chief

C. Frank Creeden, 65 former Newburyport, Mass., Fire Chief, died Feb. 2, 1954, after a long illness. He retired as chief of the department in Jan. 1952, after serving 17 years. He was a call fireman for 32 years and a member of the New England Association of Fire Chiefs since 1928.

Ex-Chief D. W. McPherson

Donald W. McPherson, 77, former Chief of the Winsted, Conn., Fire Department, died on March 27, in the Litchfield County Hospital following a long illness. A native of Englewood, N.J., Ex-Chief McPherson came to Winsted as a boy and had lived there ever since. He was Chief of the Fire Department from 1928 to 1947.

—Tom Magner

Pressurized Cans of Flammables, a New Hazard

Use of small pressurized cans of the "bug bomb" type containing such products as lacquer has brought industry another potential safety hazard to be guarded against, according to *Occupational Hazards*, March, 1954. When tossed into open fires or incinerators, this journal states, the cans heat and explode with force up to 500 psi.

A worker in an Ohio company recently narrowly missed injury from an exploding container he had tossed into an incinerator. The alert safety director immediately sent out instructions to all departments describing the safe method of puncturing cans after exhausting contents.

"Fire Chief"

FLAME-PROOF

FIRE-FIGHTING

BROOM

used by

- FIRE DEPTS.
- POLICE DEPTS.
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PATENT PENDING

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SPECIFICATIONS

60" overall length (assembled).

30" in shipping container.

Strong hickory handles.

Chemically flame-proofed.

Approved N.Y.C. Board of Standards and Appeals

Fibres extend 14" beyond metal.

Red fibres for instant identification.

Heavy duty band, stapled, holds fibres securely.

Heavy gauge rust-proof metal head and collars.

Meets U. S. Forestry and City Fire Department Specifications.

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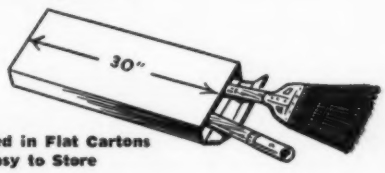

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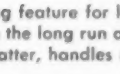
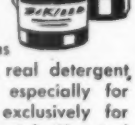
BI-LATERAL was *first* to construct hose with the bi-lateral non-creasing feature for longer life, *lower cost* in the long run and true safety. Folds flatter, handles more easily!



BI-LATERAL was *first* to change the pin-lugs to rocker lugs for safer, easier-handling couplings, lower-cost hose coupling maintenance.



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AND BI-LATERAL was *first* to furnish *free* fire hose record cards to fire departments. They are *still* available — send for a supply!

"When you buy with your conscience, with safety and economy in mind, you'll BI-LATERAL!"

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Annual Reports Received

Alarms and Losses Down in Wichita

The annual report of the Wichita Fire Department, Chief F. E. Wood, for the year 1953, shows a reduction in fire alarms, fires and fire losses. The department responded to 2,848 alarms in 1953 compared with 3,075 the year previous. Losses were $540,850 as against $740,667 in 1952.

Of the 2,848 alarms responded to, only 39 were listed as false compared with 64 in 1952. It is interesting to note that during the 1953 year the department used 505 gallons of wet water compared with 635 the year previously. Miles traveled in 1953 totalled 16,201.

* * *

Alexandria Fire Losses Sharply Up

Several large fires spiralled the fire losses of Alexandria, Va., during the year 1953, it is disclosed by the annual report of the Fire Department, Chief Bernard J. Padgett. Total losses in 1953 were $611,334 against $108,031 for the year 1952. Of the 961 alarms responded to 12 were listed as false.

Chief Padgett's report details the intensive fire prevention work of his department—with emphasis on inspections. Home inspections alone amounted to 3,722.

* * *

Waterloo Alarms and Losses Drop

The Waterloo, Iowa, Fire Department, Chief Ray Tiller, responded to 1,205 calls in 1953, a decrease of 153 over the year before. Losses were $100,879.13 compared with $517,359.93 in 1952. There were 81 alarms listed as "malicious false" of which 53 were from street boxes and 28 telephone.

In his recommendations contained in his annual report for the year 1953, Chief Tiller urges more fire alarm boxes to better cover the growing city; fire detection circuits in all nursing homes, to be connected to the fire alarm circuits; adoption of an ordinance requiring metal lathe and plaster over wood studs and wood ceiling joists in all mercantile buildings and multiple dwellings, and prohibition of fibre base wall boards in such buildings. Chief Tiller also recommends a modern fire prevention ordinance in which wood shingles would be prohibited. He again suggests elimination of grade crossings which block response of fire apparatus, and improvement in parking regulations.

* * *

Fewer Alarms, Higher Fire Losses in Rochester

Although fire alarms dropped in Rochester, N. Y., from 4084 in 1952 to 3679 in 1953, fire losses showed a slight increase—$719,518.72 as compared with $759,953.84 over the year 1952, according to the annual report of the Bureau of Fire, Chief John A. Slattery.

Of fire alarms, there were 186 false in 1953 compared with 151 the year previous. Extra alarms were up in 1953, a total of 66 last year as against 36 in 1952.

* * *

Austin, Tex., Losses Almost Double

Insured losses for the year 1953 in the City of Austin, Tex., were $616,944.20, almost twice the fgure of $347,571.28 sustained in 1952 according to the excellent annual report of the Austin

The New GA-8 PACIFIC PUMPER

Now in regular service and field tested and approved, the new "GA-8" is showing itself to be another top performer in the famous PACIFIC PUMPER line.

With or without electric starter* the lightweight "GA-8" is especially adapted to tanker use . . . as a portable unit the special sled-type mounting means easy handling in rough terrain. Light enough to be readily carried, the air-cooled, 4-cycle engine develops top volume and pressure for its weight.

The engine and pump are standard Pacific Units and have been fully tested and approved.

**Optional equipment.*

DIMENSIONS

Length	28¾ inches
Width	19¼ inches
Height	24¼ inches

NET WEIGHT

GA-8 (without starter)	115 lbs.
GA-8-S (with starter)	140 lbs.

PERFORMANCE

Pressure	G.P.M.
50	26
100	24
150	22
200	21
250	20
300	16

Normal operation is 20 G.P.M. at 250 lb. pressure.

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is a made-to-order partner for all portable or emergency water supply equipment. "Pacolized" Hose is permanently mildew-proof and rot-resistant. Made from "line" flax fibers, it is the most flexible hose of its type, lightweight and easy to carry.

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FIRE EQUIPMENT DIVISION
SEATTLE 1, WASHINGTON

Fire Department, Chief J. E. Woody. (The department responded to 1,843 calls.)

Chief Woody's report is replete with illustrations, diagrams and tabulations. It features all phases of fire prevention, including inspections, as well as fire suppression.

* * *

Blackwell, Okla., Reports Progress

The Blackwell Fire Department, Chief E. E. Gebelein, reports 198 alarms answered in 1953, with fire losses aggregating $8,280.00, which represent a slight increase over 1952. The department traveled 2,180 blocks and covered 316 miles out of the city.

Chief Goebelein's report is arranged in diary form in which fires and interesting operations are summarized chronologically.

* * *

Atlantic City, N. J., Forces Have Busy Year

Fire losses of all causes for the year 1953 in the famous resort city amounted to $796,941.50, according to Fire Chief Zeus Mathis in his annual report for that year. There were 808 alarms recorded, of which 84 were false and 38 "unnecessary." A feature of the department's activities was the inspection of hotels and other abiding places.

* * *

Great Barrington 100th Anniversary

The 100th Anniversary of the Great Barrington Fire Company—"Hope Company No. 1" as listed in the original subscription papers, dated Feb. 22, 1854, was celebrated Feb. 19, 1954, at a "Fireman's Ball" for the benefit of the Firemen's Relief Fund.

The attractive souvenir program celebrating the occasion contains an interesting pictorial history of the organization, the great fires which it fought, and other activities of Hope Fire Company. As part of the ceremonies held on May 20, 1953, Chief Thomas Tracy of the company presented 50-year fire badges to August Hammer and John Baker for their long service.

Fire Chief Attacked at Fire

As if the normal hazards of firefighting weren't enough, Fire Chief Carrol White of Mount Vernon, Ohio, had to undergo the attacks of a tenant during fire extinguishing operations, recently.

The tenant, one Robert Diles, was trying to thaw out frozen water pipes and set the house afire. The Mount Vernon Fire Department was called and Chief White and several firemen were tearing out plaster and lath when the Chief was jumped on from behind by Prentice Diles, 22, son of the tenant.

The Chief wrestled with Diles, got him out of the house, and returned to the business of putting out the fire. Several minutes later, Diles came at White again, this time wielding an 8-inch butcher knife. The Chief, with the aid of Utica volunteers who were also at the scene, overcame and tied up Diles and called the sheriff.

It was necessary for the latter to handcuff Diles before he could be jailed. He was finally locked up under charges of disorderly conduct and resisting an officer. In Municipal Court later, he pled guilty to the disorderly charged but innocent to the other charge.

Thanks LESTER WILLIAMS, M.D.

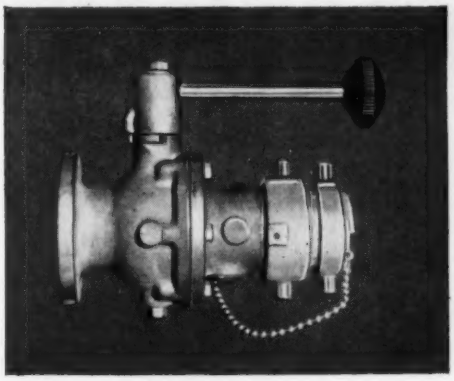
HALE TYPE "BL" SUCTION VALVES

Now Available

The Hale Ball-Type "BL" Valve is now available as a Suction Valve, handy for use in pumping from hydrant or for relaying from one pumper to another.

Picture shows 2½" "BL" Suction Valve with pin-lug swivel and pin-lug plugs, with female National Standard Thread. Special threads (within range of casting) at slight extra cost.

Valve is also available with 2½" Navy-Type slotted swivel and slotted plug.



Above—View of 2½" Hale Ball-Type "BL" Suction Valve shown with female National Standard Thread and Pin-Lug Plug and Chain. Plug and chain are optional.

Outstanding Features

- **Opens and closes easily at all pressures.**
- **Will hold high pressure or vacuum.**
- **Circular Venturi section through valve cuts flow loss to minimum.**
- **Not sensitive to dirty water.**
- **Easy and inexpensive to service . . . No "grinding in."**
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Write today for detailed information on Hale "BL" Suction Valves. Ask for Bulletin #293.

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Hale Fire Pumps are built in all Standard Capacities.

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PRICES TO SUIT ALL BUDGETS

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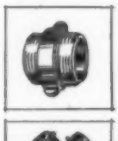
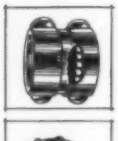
Double male connections furnished with ear lugs, as shown, or with pin lugs. Larger sizes furnished with long handles.





Double female connections all furnished with rollers, as illustrated, available in the same forms as double males.

Hydrant or pumping unit Wye, furnished as illustrated, all threads recessed with Higbee form cut.

Caps furnished in all sizes, with or without chain connection.

Angle elbow eliminates crimping of hose at the pump and allows full stream capacity.

Plain Siamese or Wye, can be furnished with one female inlet and two male outlets, or with two female inlets and one male outlet.

Screw stem type gates, including a 2½" quarter turn gate valve, for the absolute stoppage of water.

Our unmatched Eastman Deluge Gun, available in two-, three- or four-way models. Can be used as either a portable or permanent gun.

OUR PURPOSE—To provide the fire service with only the highest quality brass goods it is humanly possible to produce at a fair price—to provide the fire service with the means of delivering the most effective fire streams the field has ever known—this is both our purpose and pledge to the service. Over the years our products have attained a high standard of excellence—which will be our purpose to maintain.

OUR PROPOSITION—We will gladly ship sample outfits at our expense on 30 days' trial anywhere in the United States, subject to any test desired. If the product does not come up to our claims in every particular, you can notify us and hold shipment subject to an order. If we can accomplish what we claim you certainly should not be without the product—if we cannot it costs you nothing.

SAMUEL EASTMAN CO., INC.

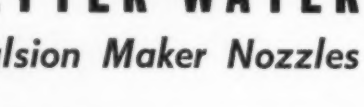
CONCORD, NEW HAMPSHIRE

UNOX® WETTER WATER *Emulsion Maker Nozzles*

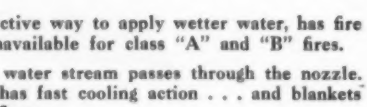
Emulsion, the newest and most effective way to apply wetter water, has fire extinguishing abilities heretofore unavailable for class "A" and "B" fires.

Aeration takes place as the wetter water stream passes through the nozzle. The emulsion spreads rapidly . . . has fast cooling action . . . and blankets the burning surface to smother the flame.

Right:
Model M Nozzle, made of aluminum, in 1", 1½" and 2½" sizes, attaches to hose thread.



Right:
Model E Nozzle, made of aluminum, attaches to 1", 1½" and 2½" Elkart Nozzles.



Ask your distributor or write for full details of UNOX Wetter Water and Emulsion Maker Nozzles.

THE UNOX COMPANY

1630 ROBERTS ST. • HOUSTON 3, TEXAS

A Division of McFARLAND MANUFACTURING CORPORATION

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of March, 1954.

Month Ending March 31, 1954

Mobile, Ala.—Cathedral of Immaculate Conception heavily damaged.

Russellville, Ala.—Two adjacent buildings occupied by Wakefield Furniture Co. and Claunch Barber Shop and City Dry Cleaners destroyed; another building occupied by Wakefield and one occupied by Moore Electric Co. damaged.

Tolleson, Ariz.—Bard Bros. Mercantile Store destroyed. Faulty wiring.

El Dorado, Ark.—Sawmill owned by Reynolds-Gammill Lumber Co., five miles southwest, on Highway 15, destroyed. Spark.

Manila, Ark.—Service department of Farmers Tractor & Trust Co., damaged. Kerosene steam cleaner exploded.

Bakersfield, Cal.—Santa Fe Railroad wheel and lumber shops, destroyed.

Brawley, Cal.—F. P. Mendoza building housing ten business establishments destroyed.

Los Angeles, Cal.—Mansion on Pacific Coast highway near Malibu, owned by W. J. Watling, damaged.

Los Angeles, Cal.—Balzer's food specialty and gift store, destroyed.

Los Angeles, Cal.—Richfield Building damaged.

Newport Beach, Cal.—Drug store damaged. Arson suspected.

Palm Springs, Cal.—Mansion of James F. Kelly, destroyed.

Sacramento, Cal.—State Division of Highways garage and workshop destroyed.

Santa Cruz, Cal.—Monte Vista Motel destroyed.

Denver, Colo.—Warehouse at Rocky Mountain Arsenal destroyed.

Bristol, Conn.—Building housing Topp's Gift Shop, Larry's Barber Shop, Central Liquor Store, Carnic's Luncheonette, S. & L. Fabrics, Stanley's Wholesale Jewelry and Arthur's Dental Laboratory, damaged.

East Norwalk, Conn.—Several stores in shopping center, including dress store, children's store and a large supermarket, damaged.

New Haven, Conn.—Henry G. Breuning Co., radio and tire dealers, and three neighboring stores, damaged.

Washington, D. C.—Maury Elementary school damaged.

Atlanta, Ga.—Downtown building housing Ivan Allan Marshall Co., an office concern; Baskette Piano Co.; Atlanta Book Store; D. C. Heath & Co. and Scott Foresman Co., both publishing firms, destroyed.

Atlanta, Ga.—Warehouse of Peaslee-Gaulbert Corp. and large quantity of furniture, washing machines, china and other related household items, damaged.

LaGrange, Ga.—Building housing Colonial Stores in downtown, destroyed.

Pocatello, Ida.—Pocatello Lumber Co. and National Laundry Co., damaged.

Belleville, Ill.—Building housing market and apartments at 601-603 Freeburg Avenue, destroyed.

Chicago, Ill.—Building owned by L. Richards & Co., Inc., burlap bag finishers, damaged.

Chicago, Ill.—Building occupied by B. & J. Novelties & Toys Co., destroyed.

Chicago, Ill.—Building owned and occupied by Rocco Rizzo & Son, paper stock company, destroyed.

Chicago, Ill.—Four buildings occupied by Elizabeth Hotel, St. Anne Hotel and LeRoy Manufacturing Co., hardware, paint and electrical supplies firm, damaged.

Effingham, Ill.—Courthouse cafe and vacant apartment destroyed; Samuel's Music Store in a neighboring building, damaged.

Lyons, Ill.—Pelron Corp., manufacturers of industrial chemicals, destroyed. Explosion.

National Stockyards, Ill.—Two barns of Producers Livestock Co., destroyed.

Mishawaka, Ind.—Interior of Club Normandy, swank downtown night club, destroyed.

Elma, Ia.—Building housing Tonn Tavern and Leo Tonn Clothing Store, Tuchek Tavern, Elma New Era newspaper plant, Stratton Barber Shop, State Liquor Store, Conway grocery and Dawn Theatre, destroyed; also R. E. Hopkins Hatchery and Produce Store, damaged. Explosion.

Mason City, Ia. — First Christian Church destroyed.

Mt. Pleasant, Ia.—Building housing James O'Connor Clothing Store, Rukaber Hardware Store, Lauger Clothing Store and apartments, damaged.

Mt. Pleasant, Ia.—Midwest Lumber Co. yards destroyed.
Sioux City, Ia.—Building housing Council Oaks grocery store destroyed.
Webster City, Ia.—Hamilton County Bank Building destroyed.
Lyons, Kans.—Garage and storage building at Lyons Pepsi-Cola bottling plant, destroyed.
Olathe, Kans.—Frye Opera House, W. L. Frye & Son Furniture Store, bank building and apartments, east of the courthouse square, damaged.
Lexington, Ky.—Cole's Hardware Store and Rosemont Drug Store, Lafayette shopping center, destroyed. Gas explosion.
Louisville, Ky.—Firestone Dealer store damaged.
Middleboro, Ky.—White Furniture Co. warehouse destroyed; store damaged.
Paducah, Ky.—Taylor office building and Wolfson's department store in heart of downtown, destroyed.
Warfield, Ky.—Methodist Church and apartment building and radio repair shop, destroyed.
Charenton, La.—Historic 125-year-old Church of Immaculate Conception, destroyed.
New Orleans, La.—Booker T. Washington High School damaged. Arson suspected.
Baltimore, Md.—Laboratory at Morgan State College destroyed.
Princess Anne, Md.—Prince Anne post office building destroyed; furniture stores of James B. Greene and J. W. Donohoe destroyed.
Texas, Md.—Calcite crushing plant and storage tower owned by Harry T. Campbell Sons Corp., destroyed. Welder's spark.
Westminster, Md.—J. C. Penney Co., store damaged.
Attleboro, Mass.—Attleboro & Plainville Coal Co. storage sheds, damaged. Incendiary by juvenile.
Boston, Mass.—Mercantile Building, Oak Square, Brighton section, and five-and-ten store of Sidney Swartz and Hunnewell Market, damaged.
Boston, Mass.—Grove Hall and recreation center, Dorchester section, damaged.
Fall River, Mass.—Building 333-335 Bedford Street, containing four tenements and wholesale grocery storage, damaged. Incendiary by juveniles.
Gloucester, Mass.—Planing mill and storage building of Gloucester Marine Railways, Inc., destroyed.
Gloucester, Mass.—Amvets headquarters and clubhouse damaged.
North Attleboro, Mass.—Barber Electric Manufacturing Co. building, a private residence and foundry company annex, 400 yards from the community's business center, destroyed.
Pittsfield, Mass.—Michelman block owned by Signature Loan Co., occupied by Rogers Jewelry Co., National Shoe Store, Jo-Belle Toggery Shop, quarters for Dante Alleghri Society and Ancient Order of Hibernians, destroyed.
Somerville, Mass.—Cott Beverage Co. plant and several adjoining houses, destroyed.
Battle Creek, Mich.—Gamble Store destroyed.
Escanaba, Mich.—Branch plant of Birds Eye Veneer Co., destroyed.
Forester, Mich.—Methodist Church destroyed. Lightning bolt.
Holland, Mich.—Building of Holland Color & Chemical plant, destroyed. Defective wiring.
Howell, Mich.—Dwelling of Alfred Alizon, destroyed.
Jackson, Mich.—Zantop Flying Service hanger at Rynolds airport, destroyed.
Midland, Mich.—Reinhart building largest business block in city containing J. C. Penney Co. store, Earl J. Lebeau jewelry, Town Shop gift store, real estate offices, several doctors and lawyers' offices, destroyed.
Novi, Mich.—Novi Inn damaged.
Pewamo, Mich.—Rathburn Boat Shop destroyed.
Pontiac, Mich.—One hundred and thirty trucks, offices, showroom and service garage at Jack Habel Chevrolet Co., destroyed.
South Haven, Mich.—Michigan Fruit Canners warehouse destroyed. Overheated gluepot.
Chatfield, Minn.—Hervey Implement Co. destroyed.
Crookston, Minn.—Old Northwood Inn destroyed.
Minneapolis, Minn.—Maintenance hangar of Twin Cities Airport destroyed.
St. Paul, Minn.—Swenson's drug store, bakery and Arkwright beauty shop, damaged.
Canton, Miss.—A major portion of King Lumber Industries plant, destroyed.
Decatur, Miss.—Walton Bros. Hardware Store and Decatur Drug Store, together with office of Dr. Ed Pennington, destroyed. U. S. Post Office building and Kermit Jackson and Thomas Giles dry goods stores, damaged.
Hattiesburg, Miss.—Hangar and 22 privately owned planes at Hattiesburg Municipal Airport destroyed; adjacent office of Delta Air Lines damaged.
Joplin, Mo.—Building near heart of business district, occupied by Midwestern Office Equipment Co. and warehouse operated by Joe Harding, destroyed.
Kansas City, Mo.—Hay and sheep barn in the Stockyards area, owned by Jay B. Dillingham, destroyed.

FAIRBANKS-MORSE

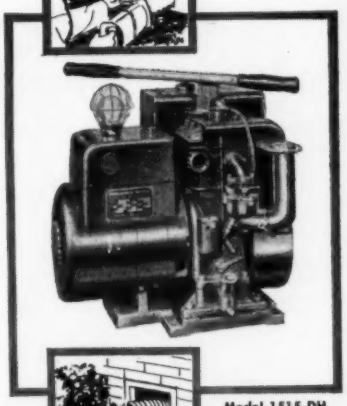
Portable Generators

for fire fighting —life saving

Many fire companies make room on one pumper or disaster truck for one or more Fairbanks-Morse portable power generators. They are used to power communication systems and pumps, floodlights, smoke evacuators and power tools. Fire prevention officials often recommend larger Fairbanks-Morse generators for emergency service in stores, theatres, and public buildings. Sizes 10 kw. to 40 kw. a.c. can be installed as permanent mobile units. For complete information write Fairbanks, Morse & Co., Chicago 5, Illinois.

Floodlights

Power tools


Model 1515-DH 1500 watts d.c., 115 volts, manual starting.

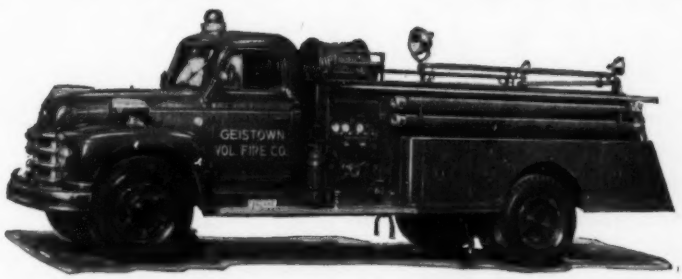
Smoke evacuators

Communications

FAIRBANKS-MORSE
a name worth remembering when you want the best

WATER SYSTEMS • GENERATING SETS • MOWERS
HAMMER MILLS • MAGNETOS • PUMPS • MOTORS
SCALES • DIESEL LOCOMOTIVES AND ENGINES

Champion Fire Apparatus



A highly efficient pumper apparatus with the Champion Three Stage Centrifugal Pump powered by Diamond T. The Pump is the Type SH750 which delivers 750 gallon Underwriter performance plus 60 gallons per minute at 850 lbs. for high pressure fog.

Or this Darley Apparatus is also available in Underwriter capacities of 600 GPM and 500 GPM. Modern commercial truck motors have adequate power for either 750, 600 or 500 GPM pumps.

44 PAGE BOOKLET of FIRE APPARATUS & FIRE PUMPS

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Factories—Chicago and Chippewa Falls, Wis.

W. S. DARLEY & CO., CHICAGO 12

AT YOUR SERVICE: Sales and Service Representatives—East, Midwest, North, South

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GREATEST NAME IN

BADGES

SERVING THE FIRE FIELD

Since 1879

Firemen the world over rely on Braxmar for the finest badges money can buy. We offer the widest possible selection in nickel, chrome plate, sterling silver, gold plate, rolled gold and solid gold; all of our badges and insignia are the work of experts with a lifetime of service.

Write for latest catalog and price list.

Dealer inquiries invited.

C. G. BRAXMAR CO., Inc.

JOHN O. VEIT, *President* — JOHN O. VEIT, JR., *Secretary-Treasurer*

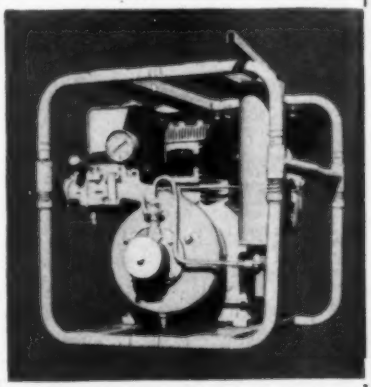
216 E. 45th Street, New York 17, N. Y.

Missoula, Mont.—Missoula County Airport hangar and nine planes destroyed. Explosion.
Gothenburg, Neb.—Tetro's Sales & Service Co. building destroyed. Firm dealt in Pontiac automobiles and International Harvester machinery.
Las Vegas, Nev.—Atlas warehouse in midtown Las Vegas, destroyed.
Atlantic City, N. J.—States Villa Hotel destroyed.
East Paterson, N. J.—Storage and business area along a siding of the New York Susquehanna and Western Railroad, owned principally by New Jersey Farmers' Supply Cooperative Association and United Home Products Co., destroyed.
Flemington, N. J. — Flemington Elementary School destroyed.
Folsom, N. J.—Lumber in yards of Whitmeyer Bros. destroyed.
Red Bank, N. J.—Nat's Jewelery Store and six adjacent stores and two offices in Kridel Building, damaged.
Sewaren, N. J.—Royal Petroleum Co., on Arthur Kill River, damaged.
Trenton, N. J.—Westinghouse Lamp Co. damaged. Explosion.
Union City, N. J.—Building occupied by the Hoffman Co., floor covering concern, damaged.
Buffalo, N. Y.—Warehouse owned by Bison Waste and Wiper Co., Irving Paper Mill Supply Co. and C. G. E. Ornamental Iron Works, heavily damaged.
Buffalo, N. Y.—Paper warehouse occupied by D. J. Mead & Sons, paper jobbers, destroyed.
Camden, N. Y.—Laribee Machine Co., Inc., destroyed.
Canandaigua, N. Y.—Building occupied by dress shop, men's store, news and cigar store, jewelry shop and barber shop, destroyed.
Middletown, N. Y.—Barn and adjacent buildings on George T. Ogden farm, destroyed. Arson.
Newburgh, N. Y.—Rocco Handbag Co. factory destroyed.
North Collins, N. Y.—Grocery and apartments owned by James J. Alessi, destroyed.
Nyack, N. Y.—Three houses and half of the factory of Sheeley & Co., near the center of business section, destroyed.
Shelter Island, N. Y.—The Forest Inn, resort hotel, destroyed.
Asheville, N. C.—Haywood Building, warehouse of Perlmans furniture store, IXL store and Bon Marche store, damaged.
Cove City, N. C.—Wells-Oates Lumber Co. Separator shed, office building, destroyed.
Elizabeth City, N. C.—Singer Sewing Machine Co. store, destroyed; adjacent restaurant and jewelry store, heavily damaged.
Jacksonville, N. C.—Onslow Motor Co. garage and auto parts salesroom, destroyed.
Kinston, N. C.—Hines Bros. Lumber Co. boiler room, sawmill and lumber shed, destroyed.
Smithfield, N. C.—Dwelling of Dr. V. A. Davidian at Holt's Lake, destroyed.
Wilmington, N. C.—H. G. Bryant Electric Corp. warehouse, destroyed.
Wilmington, N. C.—Southern Oil Co. buildings on Eagle Island in Cape Fear River destroyed. Fumes from stove ignited.
Rugby, N. D.—Jacobson department store building which also housed Ostrem shoe store; Rugby insurance agency building, Northwestern Bell Telephone Co. building, Gronvold Motor Co., all in business district, destroyed.
Bowling Green, Ohio—City's electrical department barn destroyed.
Cincinnati, Ohio—Warehouse of Magnus Brass Division of National Lead Co., destroyed.
Mansfield, Ohio—Portion of Mansfield Lumber Co. plant near downtown district, destroyed.
Mount Gilead, Ohio—Leland Ebersole & Sons' custom butchering and locker plant, four miles southeast, destroyed.
Atlas, Okla.—Pharmacy and Delta Theatre, in business district, destroyed.
Clinton, Okla.—Feed and cottonseed storage building of Clinton Cotton Oil mill, destroyed.
Bend, Ore.—Leonard London Lumber Co. destroyed.
Klamath Falls, Ore.—Modoc Planing Mill and box factory of Fleishman Lumber Co. destroyed.
Belle Vernon, Pa.—Dwelling and fruit market along Main Street near Speers-Belle Vernon Bridge, destroyed.
Chester, Pa.—Morton's Furniture Store damaged.
Coaldale, Pa.— Appliance store and service station owned by George Solberick, destroyed.
Connellsville, Pa.—The Sports Wear Co. destroyed.
Frankford, Pa.—Sheds of Joseph G. Neidinger Co., destroyed.
Mayfield, Pa.—Anthracite coal breaker owned by Motley Coal Co. destroyed.
Philadelphia, Pa.—Juniata Club damaged.
Pittsburgh, Pa.—Easton Lumber Co. building on Route 19 in Peters Township, Washington County, destroyed.
Radnor, Pa.—Amport House, County Line and Gulph Creek roads, damaged.
Titusville, Pa.—American House Hotel destroyed.
Vandergrift Pa.—Apartment of the Eagles Lodge destroyed.

HAS YOUR FIRE TRUCK A HALE TYPE FZZ?

". . . All Fire Trucks should have one or more"

says Fire Chief from Missouri



Above—This frame-mounted FZZ (with carrying handles turned in) can be easily carried to source of water which truck cannot reach, for refilling booster tank or for fighting fire direct. Unit is also available mounted on two truck-type wheels or on rubber-cushioned steel channels. Note: Discharge adapter can be supplied for use with 2½-in. hose.

Chief R. M. Wilson of Monroe City, Missouri, suggests that all Fire Trucks should have a Hale type FZZ portable pumping unit . . . He writes: "I want to tell you how pleased I am with this FZZ pump. We received it May 27th. On May 29th I was compelled to use it during a bad rain storm as our large pumper was unable to reach water supply. We put the little pump at a pond, used 500 ft. 1½" hose layout, and saved this farmer almost $2,000.00. The FZZ gave a nice fire stream. The motor started on the first pull in a downpour of rain. Not one time did it stop. We used it for almost 2 hrs. Had we not had this portable pump, there was no way we could put out this fire. I think all fire trucks for Town or Country should have one or more."

Above—FZZ Pumping Foam. (Foam proportioner built in if specified.)

With a ready-for-use Hale FZZ you can fight fires not only with solid stream and/or fog, but also with foam—a valuable weapon against gasoline truck fires.

The easily portable FZZ can be mounted in any apparatus, making it possible to fight fires while apparatus is in motion, using booster tank for source of water. CAPACITY 60 G.P.M. at 90 lbs. pressure; 150 G.P.M. at 30 lbs. pressure; ample reserve capacity. *Ask for demonstration; no obligation.*

Write today for FZZ FOLDER to:

HALE FIRE PUMP COMPANY

CONSHOHOCKEN, PA.

Fire Pumps in All Standard Capacities

West Norriton Township, Pa—Unoccupied mansion on Jarman Estate, destroyed.
Columbia, S. C.—Dwelling of John E. Edens destroyed. Cigarette.
Greenville, S. C.—Dwelling by Mrs. Walter W. Robinson, damaged. Exploded electric water heater.
Spartansburg, S. C.—Edwards Motor Car Co., Inc., destroyed. Overturned oil stove.
Kingsport, Tenn.—Sullivan High School at Sullivan Gardens, damaged.
Nashville, Tenn.—Randall Nut Co. destroyed.
Nashville, Tenn.—Nashville Display Co. and Nashville Wire Products destroyed; Cumberland Storage Co. and Nashville Tool and Stamping Co. in adjoining building heavily damaged and Nashville Trailer Sales Co. and New Idea Farm Equipment Co. damaged.
Nashville, Tenn.—Tennessee Motor Lines plant damaged.
Trenton, Tenn.—Rosenwald Negro School building destroyed. Faulty wiring.
Coleman, Tex.—The Jinright Manufacturing Co. plant, makers of Women's Westernwear at Coleman Municipal Airport, destroyed.
Dallas, Tex.—Warehouse at Farmers & Merchants Compress destroyed.
Rockwell, Tex.—Jack Cunningham Drug Store building housing two doctors' offices and an aluminum company office, and two adjacent buildings, one housing a cleaning shop and dress shop and the other a school tax collection office, destroyed.
San Antonio, Tex.—Brown's Cafe and Reyes Supermarket damaged.
Wichita Falls, Tex.—Strand Theatre destroyed.
Provo, Utah—First Security Bank Building destroyed.
Middlebury, Vt.—Middlebury High School destroyed.
Newport, Vt.—Warehouse of H. P. Hood and Sons milk firm, destroyed.
Charlottesville, Va.—Lane High School building destroyed.
Norfolk, Va.—Show of Month Club, Princess Anne County, destroyed.
Seattle, Wash.—FLT Sportswear Co., Johnson Wholesale Drapery Co. and Mutt & Jeff Tavern, damaged.
Spokane, Wash.—Giant ten engine B-36 bombet destroyed.
Tonasket, Wash.—Yarnell Fruit Warehouse destroyed.
Walla Walla, Wash.—Stateline Furniture Manufacturing Co., destroyed.
Yakima, Wash.—Yakima Lumber Box Co. destroyed. Cigarette.
Beckley, W. Va.—Building occupied by Commercial Hotel, Bell Brothers shoe store and Amvets Club, destroyed.
Boomer, W. Va.—Six duplex dwellings occupied by John T. Taylor, Paul Boggs, Earl Pettry, W. R. White, Dale Walker, C. P. Vandall, William Richmond and Ruby Kenna, on old U. S. 60, Fayette County, destroyed. Overheated stove.
Sheridan, Wyo.—Dwelling of W. Cameron Forbes, former Governor-General of the Philippine Islands, in Becton area, 12 miles west, destroyed.
Winnipeg, Man.—Two hotels across the street from Winnipeg's City Hall, destroyed.
Oshawa Ont.—Building housing 10 small industries including three auto body shops a welding plant, woodworking business two electrical firms and a car wash, on King Street, West, destroyed.
Kingston, Ont.—St. Remy Motors garage destroyed.
Midland, Ont.—One of Canada's largest fur processing plants of Midland Shearings, Ltd., destroyed.
St. Catherines, Ont.—Botsford & McGee tire store destroyed. Faulty temporary wiring.
Montreal, Que.—Barney office building, spread to Parkes office building and Lorrain Laboratories, destroyed.

Orchids to Owen Ogburn

Daniel Burns, employee of a Charlotte, N. C., Roofing cmpany, was firing a roofing furnace when a hose on the apparatus broke, spraying him with flaming fuel oil.

He jumped from the truck on which the furnace was mounted and ran down the road in panic and pain.

Owen Ogburn, of the Charlotte Observer (a newspaper), took after the running man, tackled him, stripped his jacket off, and used it to extinguish the flames.

Burns was rushed to Good Samaritan Hospital, where his condition was reported "fair, with quick recovery likely."

—D. G. S.

FIRE-FIGHTING GETS A VERSATILE ALLY

UNDER DOCKS AND BRIDGES

IN DEBRIS-FILLED WATERS

IN SHALLOW MARSHY AREAS

UNDER FLOOD CONDITIONS

This JET NOZZLE

Does Everything!

in the NEW KERMATH HYDROJET

AVAILABLE WITH KERMATH 61 H.P. SEA-JEEP ENGINE

This amazing new propulsion unit has been developed to propel water craft without a propeller or rudder by taking water from outside the boat and discharging it as a high speed jet stream under the stern.

A simple connection provides a high or low pressure water stream for fire fighting, using standard hose. Because there are no moving parts under water, a Hydrojet-powered boat can operate with 100% efficiency in shallow and debris-filled waters, beneath docks and bridges, in marshy areas and under flood conditions where ordinary fireboats would be at a disadvantage.

For informative literature and specifications, write to—

KERMATH MANUFACTURING CO.
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Canadian Plant: Kermath (Canada) Ltd., 619 King St. W., Toronto 2, Ontario
A SUBSIDIARY OF BARIUM STEEL CORPORATION

KOHLER ELECTRIC PLANTS
Independent Source of Electricity

For floodlights, rescue work, power tools

PORTABLE model is widely used by municipal and volunteer fire departments for floodlights, smoke eradicators, resuscitators, power tools, rescue equipment. Develops 1500 watts. Fits in small space. Equipped with 4 receptacles, pilot light, double carrying handle. Rubber-tired hand truck available. Other sizes, 500 watts to 30 KW. Also stand-by models to operate signals, sirens, when central station power is cut off. Write for booklet 13-S.

MODEL 1.5M25, *1500 watts, 115 volt AC. Manual control. Weight 130 lbs. Also 115 volt DC model weighing 101 lbs.*

Kohler Co., Kohler, Wisconsin. Established 1873

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS
AIR-COOLED ENGINES • PRECISION CONTROLS

DEPEND ON

ATTWOOD HARDWARE

Fire fighting is an exacting occupation. One mistake may be the last.

Likewise, the manufacture of fire fighting trucks is a very exacting business. Every piece of equipment must be dependable to eliminate any chance of mechanical failure.

For many years Attwood has supplied over 90% of the fire equipment manufacturers with standard and special hardware and fittings.

Contact Attwood regarding the manufacture of equipment to your specifications.

ATTWOOD
BRASS WORKS
GRAND RAPIDS 4 MICHIGAN

The new improved model MEMCO AERIAL LADDER is an economical all-metal ladder unit designed to be installed on existing truck or to be installed on new equipment by your fire truck manufacturer. Electrically raised and lowered by power from the truck battery.

For details write...

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1007 N. W. 36th Street
Oklahoma City 3, Okla.

Morning Pride
FIRE SUITS

Fleece Lined
Natural Rubber

Flannel Lined
Combined Duck

High Quality
Army Duck

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MITTENS
GLOVES
DETACHABLE
LININGS

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MORNING PRIDE MFG. CO.
1986 HOME AVE., DAYTON 7, OHIO

World Wide Fire News

By Roi B. Woolley

Fire Streams Help Quell Riots

Fire department participation in riots, jail breaks and like emergencies has always been a moot question. The subject was discussed by the Board of Directors of the International Association of Fire Chiefs at its last meeting in New York. Meanwhile, small items in the news typified by the following may help to still further muddy the waters.

CALEXICO, CALIF., Jan. 27 (UP).—Fire hoses were used today to turn back thousands of Mexican farm laborers attempting to stampede across the United States-Mexican border in search of work.

The Fire Department of Mexacali manned the hoses at the request of the Mexican border officers. Several of the workers were trampled and injured.

* * *

Gas Well Fire Costs $69 Per Minute

On March 12th a gas well near Monument, 10 miles south of Hobbs, N. M., fed by an estimated 100 million cubic feet of roaring gas every 24 hours, was burning despite the efforts of fire fighters to control it.

The well, known as Sinclair Oil Co. Barber No. 13, caught fire at 8:45 o'clock P.M. on the day before. The gas burning was reported to be enough for the daily supply of a city of 350,000 population, about the size of Ft. Worth, Tex.

Winds up to 62 miles an hour whipped the flames the night of the 11th making fire fighting hazardous. The wind had dropped to about 40 mph on the 12th.

The roar of the fire was audible five to six miles and the flames were visible for about 11 miles.

At 10 cents per 1000 cubic feet, a common wellhead price, the gas being consumed is worth $69.44 a minute, or $1.16 a second, petroleum men said.

Specialists in oil well fire control were on the scene, but no prediction was made as to how the blaze would be subdued, or by what method.

* * *

From the World Fire News Ticker

At Rio Bravo, Mexico, houses picked up bodily by volunteer workers were removed from the path of a raging fire that destroyed nearly a block of business establishments, Feb. 8th, last. A group of nearly 90 men picked up the small one-room and two-room houses from their foundations and carried them to safety. The fire started in a small cafe of the small border town of 6,000, near McAllen, Tex., and quickly destroyed half a dozen small business buildings. . . . A stock of war-time sea mines exploded in a warehouse outside Kiel, Germany, killing three workers and injuring eight. Two men were reported missing. . . . Four persons were killed and 10 injured when part of a nitroglycerin factory near the town of Nora, Sweden, blew up Jan. 25th. . . . A fire that raged out of control for five and a half hours Jan. 25th destroyed a complete block occupied by the old Municipal Market, in Guatemala. Damage estimated at more than $250,000. . . . On the same date, fire believed to have started from a cigarette swept through a township near Allahabad, India, burning

PROTECTS your face

Heat-reflecting, aluminized asbestos fireman's hood with built-in safety helmet . . . goes on in seconds . . . gives you that extra protection around the face that often makes all the difference in saving a life or valuable property. Helmet has adjustable felt lining. Window is ¼" laminated safety glass, measures an ample 5" x 6¾". Gloves shown are #460, 14", asbestos—one of many styles we furnish.

Write for further information.

FIRE RESCUE SUIT

Field Tested up to 1800° F.

When searing heat calls for a man in a fire suit *fast*, he's got to get that suit on in a hurry—without fumbling. That's the ISSCO Fire Rescue Suit. A man can be in it and ready for action in less than a minute—*without help*. He's completely protected, in a roomy, pliable garment weighing only 28 lbs. He can see well. He can work rapidly, effectively—saving lives or knocking out the heart of a blaze quickly. Not just another "asbestos suit," but a scientifically compounded garment utilizing fibre glass, aluminum foil, vinyl-treated glass cloth and asbestos. Rigidly field tested up to 1800° F., with and without respiratory equipment. Complete details on request.

ISSCO makes a complete line of protective clothing — suits, gloves, mitts, coats, chaps, aprons, blankets, etc.

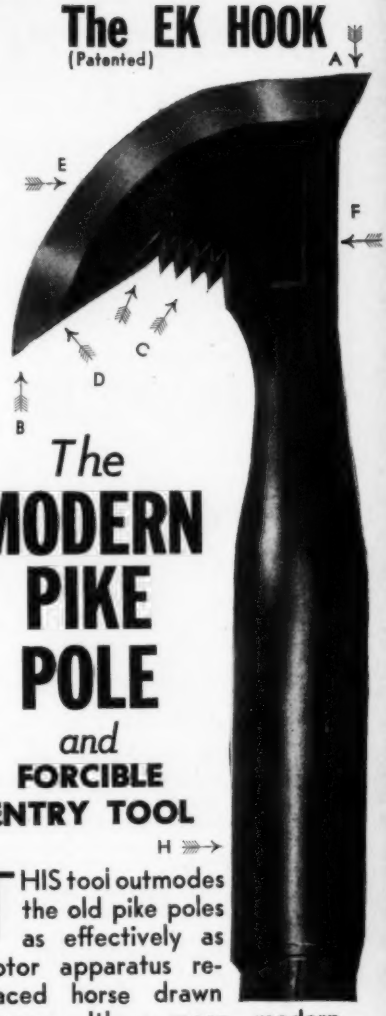
INDUSTRIAL SAFETY SPECIALTIES COMPANY

8th and Chestnut Sts., Perkasie, Pennsylvania

Protective clothing for every situation!

one woman to death, injuring 12 persons, and destroying 150 huts. . . . In Mexico City, on Jan. 27th, 1600 movie fans hurried out of the burning Granat Theatre just before the roof collapsed. Ten persons suffered minor injuries. The spectacular blaze was caused by an explosion in the projection room. All available fire-fighting equipment and ambulances were rushed to the scene in the thickly populated downtown area. The building was a pile of ashes within an hour. . . . The 6,829-ton American freighter Zoella Lykes docked in Liverpool, March 3, with a smoldering fire in a cargo of cotton. Firemen met the vessel and went to work on the blaze. . . . In Sweden the danger of nylon on board oil tankers was stressed by a shipping board official. Friction between nylon and steel plates, especially in dry weather, he said, may produce static sparks capable of causing explosion of gasoline fumes. . . . A fire that swept three villages in the Nile delta, Egypt, Feb. 3, left 700 persons homeless. One child was killed and 31 persons injured in the fire in Gharbiya and Fouaduya provinces. . . . In Copenhagen, Denmark, firemen were called to put out a fire in a water wagon at Roskilde. The wagon, used by a building contractor, was covered with straw as protection against freezing. The straw caught fire and made it impossible to use the contents of the wagon to extinguish the flames. . . . In Guelph, Canada, some officials have queer ideas of the fireman's life. An arbitration board attempting to settle a wage difference between city council and fire fighters, heard City Solicitor R. B. Hungerford argue that the wage should be determined by the "leisurely", easy occupation of the fire fighters. They had asked $10 a week increase and the city offered them only 5 per cent of their present salaries. . . . Communist party headquarters in Aversa, Italy, was destroyed by fire Mar. 2. Police said persons had broken into the offices and set the fire with gasoline. . . . Fire raging 18 hours destroyed $175,000 worth of crude oil at Banais, near Damascus, Syria, Syrian terminal of the pipeline from the Iraq fields, before it was controlled Feb. 23rd. Lightning blamed. . . . A $3½ million B-36, the world's largest bomber, caught fire on the Fairchild Air Force Base runway, Spokane, Wash., and was destroyed Feb. 27th, but all 20 men aboard scrambled to safety unharmed. Fire was detected in a engine by an alert crewman as plane was warming up for a routine training mission. . . . Fire Chief Harry J. Sommers of Newark, N. J., said that five boys, 5 to 9 years old, taken into custody in February, had turned in at least 40 false alarms of fire since Jan. 1. . . . The only fire truck in the town of Winona, Tex., was destroyed by fire Feb. 7th, last, when a grass fire got out of control. . . . Firemen usually have to settle for coffee-and- doughnuts as "refreshments" while fighting fires, but in Waltham, Mass., recently, while battling a $500,000 blaze, they were served this bill-o'-fare" by civil defense: tomato bisque, lobster salad sandwiches, cake (three kinds), chicken salad, baked ham, assorted cheeses, cookies, doughnuts, milk and coffee. *Oh fer the life of a fireman!* . . . For the first time in the 52-year history of the Elizabeth, N. J., Fire Department, a woman was added to its payroll. On February 3rd, Mrs. Stanley Sobota was named clerk-steno' at $3,000-per-year.

The EK HOOK
(Patented)



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THIS tool outmodes the old pike poles as effectively as motor apparatus replaced horse drawn wagons. It's a mean, modern, miracle of a tool. It's tough! Made of chrome nickel molybdenum alloy steel — heat treated, ground and sharpened.

(Working Points Indicated by Letters)

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It is far more efficient and has more utility than any other tool of its type designed for demolition, ventilation and forcible entry for all Fire Department and Civilian Defense Units.

Weight with 6' handle 7½ lbs.

Up to 6' **$24.85**

Longer length at 85¢ per ft. additional.

Sold only thru distributors.
Distributors' franchises now available.

The C. D. PIKE & FIRE HOOK MFG. CORP.

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"HEAD-MASTER"

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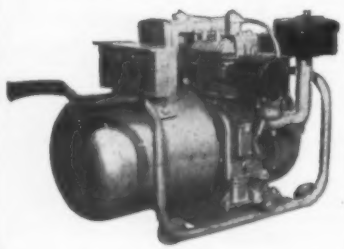
Established 1895

NEW . . . 2000 WATT FIRE DEPARTMENT ELECTRIC PLANT



Designed for operating floodlights, radio, pumps or blowers. Two men can carry it—and one man can wheel it around! 2000 watt 115 volt, A.C. Takes little space on the truck . . . only 22 x 18 x 20 inches high. Write for information on this and other Electric Plants built by "U.S." for fire department use.

UNITED STATES MOTORS CORP.

420 Nebraska St.

Oshkosh, Wisconsin

The WATCH DESK

Overhauling the firemanic news of the day

by ROLF WOOLLEY

He Huffed and He Puffed and Blew the Fire Out!

Up Superior, Wis.—way, Duane Miller is a man with a set of Paul Bunyan lungs—the original Joe Blow. Seems when a fire started in a motor car, Miller blew in on wings of wind, and huffed and puffed—and blew the fire out!

Miller was awakened during the night of Jan. 11th, last, by the commotion, when a Mrs. Francis Huettl aroused a neighbor over a fire which involved her car when she was driving home. The car quickly became filled with smoke, and Mrs. Huettl sought help.

Dressing quickly, like a fireman, Miller hustled out to the car, lifted the hood, took a deep breath, and blew out the fire, just as two fire trucks and a squad car came barreling down the pike.

* * *

Language a Grim Handicap at Fatal Fire

One of the major drawbacks to the use of the telephone as a means of communicating fire alarms is that of a difference of tongues. And sometimes language, or lack of it, can be the direct cause of death. This was brought out in January, when fire swept through the three-story house at 262 Himrod Street, Brooklyn, N. Y.

"It was awful! It was awful! She just didn't understand. If she only knew a little English, she wouldn't have died in the fire."

In these words a neighbor who lived with her husband on the second floor of the apartment described what happened when fire swept through the structure, to result in the death of 67-year-old Mrs. Rosalia Lalla, a widow.

When the fire broke out, the neighbor was with her daughter on the third floor. They heard shouts and ran into the smoke-filled hall. "I ran downstairs to tell my husband," the neighbor said, "and he telephoned the fire department. Then I ran back up stairs and we bundled up our two-months-old grandchild in a blanket. We banged on the next door. Mrs. Lalla came out, but we couldn't make her understand she had to leave. She went back in. We banged on the door again and pulled her out. But she just wouldn't leave. She couldn't understand a word we said, I guess."

Firemen found Mrs. Lalla's body in her apartment. The victim's daughter was not at home at the time of the fire. Police said the fire started in the basement when a can of gasoline beside the furnace exploded.

In this fire the telephone—in the hands of the right person, brought fire fighters—but confusion of languages is believed to have resulted in death.

* * *

Squirrel Smoking in Bed?

A nutty yarn, this, and about a fire of all places in Central Park, New York City, one that literally and figuratively put Manhattan firemen "up a tree."

Someone, according to the press, "possibly a squirrel smoking in bed," started a fire in a tree in Central Park, Jan. 14th, which called out two fire companies before the mysterious blaze was extinguished.

The fire was discovered in a 50-foot sycamore, situated south of the 96th Street Transverse Road, some 100 feet west and 300 feet south of Fifth Ave.

Smoke was pouring from a hole in the tree about 25 feet up when Engine 22 and Ladder 13 rolled up in response to a telephone alarm about a burning tree, a report which first had Manhattan fire alarm dispatchers, not so far away in Central Park, guessing. There aren't so many trees to burn in Manhattan y'know.

Well, the Brothers waded into it, stretching a 2½ in. line to the burning tree, thence up a ladder to drown out the blaze, and the hapless squirrel, if that was his abode. All the time traffic on the busy Transverse Road was held up.

Thanks JOHN D. CULLINAN

* * *

13th Floor Rescue via 165-ft. Crane!

Twenty construction workers, caught in a flash fire on the 13th floor of a housing building under construction at Stone and Livonia Aves., Brooklyn, N. Y., probably owe their lives to Frank Gray, Yonkers, N. Y., and his 165 ft. crane.

Wooden forms, which had been set up on the 13th floor for concrete, caught fire shortly before noon March 19th. The twenty men working there were cut off from the ladders which lead to the 7th floor and to the construction elevators used between that floor and the ground.

Gray, at street level, spotted the flames about as soon as the men on the 13th floor did and poised his concrete bucket at that level. "Get in," he yelled.

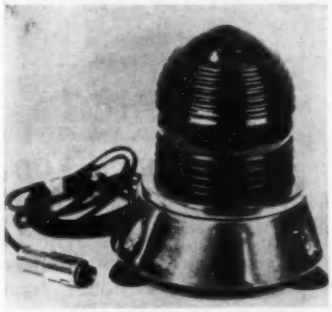
It turned out that the bucket had a capacity of eight men, but two more got aboard, perched outside on the narrow ledge at the bottom and clinging to the sides.

The flames had surrounded the men on three sides on the 13th floor and had reached containers filled with butane gas, used for the salamanders for drying fresh plaster. The gas cylinders exploded, blowing planks and timbers out through the framework.

None of the debris fell close to Mr. Gray, however, and he gently swung the long arm of his crane away from the building and lowered the bucket to the ground, bringing it to rest on an even keel. Whereupon the ten men clambered out and the craneman sent his "passenger car" up again. The remaining ten men got aboard and were lowered to safety.

The entire operation took seven minutes. Meantime a fire alarm had been turned in and the first battalion chief on the scene shot in a second alarm, while fire fighters dragged hose up through the skeleton, and brought outside deck pipes and water tower streams into action. It was half an hour before they had the blaze under control and before they were sure of no further blasts from Butane cylinders. They managed to

EMERGENCY SAFETY LIGHT



Designed not by us, but by our customers, for use at emergency scenes, this light has become very popular throughout the country. One customer has already purchased 104 of them!

It is the regular Clearway with the addition of three suction cups, 12 feet of wire with plug to fit car lighter, 50 C.P. bulb and flasher. Overal height—8".

$20

Order from your dealer or direct including the name of your dealer.

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The New Improved Dayton

COMBINATION EXPANDER

6 FEATURES IN 1

Expander for Hose Sizes from ¾" to 3"
Greater Expansion · Greater Economy
Easy to operate
Segments Furnished with Adjustable Spacer
Visual Indicator to Determine Amount of Expansion

BE PREPARED FOR ANY EMERGENCY
THE COST IS LOW
Send for Illustrated Bulletin

Dayton Fire Equipment Co.
1242-48 W. 2nd St., Dayton 7, Ohio

rescue the remaining eleven containers without injury to anyone.

Crane operator Gray, aged 44, regarded his exploit as just part of the day's business. He didn't even mention it to the police making a report on the fire. The smoke-eaters, however, had watched the rescue device with great interest and it was through their admiration of Mr. Gray's prompt action that the news leaked out.

A doff of the benny to Brother Gray! —Captain of New York's first "165-foot aerial."

* * *

Hot Off the Tape

In Plentywood, Mont., an unidentified motorist took two sharp turns with his car of a Sunday and (1)knocked off a fire hydrant at its base; (2) drained the towns' water tank of its 110,000 gallons of water; (3) left that northeast Montana community of 2,000 without usable water for about five hours. . . . In Louisville, Ky., three persons died and four others were injured seriously Feb. 27th, last, in an apartment building fire seen by thousands on their TV sets. Blaze occurred across from the WAVE-TV building and the TV station rolled its cameras to the window. . . . A farmer, near Elizabethtown, Tenn., was charged Feb. 27th with starting a forest fire in which four youths burned to death. The fire in Cherokee National Forest, near Elizabethtown, was controlled by fire fighters, including U. S. forest rangers. . . . Said to be the smallest fire ever to occur in St. Paul, Minn., the "blaze" caused a 20-minute traffic jam in downtown St. Paul March 4th. The fire was confined to a knothole in the floor of the state unemployment service office. . . . Fire fighters of Larchmont, N. Y., fed up with being called three times within the week to fires in a hollow tree, finallly toppled it, after the second run to it within two hours. . . . In New York City, twenty blind supervisors aided by three seeing-eye dogs, safely led 75 blind workers out of the Industrial Home for the Blind, in Brooklyn, during a minor fire, Feb. 4th. . . . Tarrifville, Conn., fire fighters went formal in tackling a recent fire. They were in formal evening dress for their annual ball when the alarm sounded for a chimney fire. Chief Vincent Plona was a bit late getting to the scene, but he alone arrived dressed as a fireman should be—he was in the bathtub when the alarm sounded. Firemen well-sooted for a chimney fire, eh? . . . . A game of 'cops and robbers' almost ended disastrously recently in Springdale, Ark., when an 11-year-old boy was tied by his brother, aged 14, to a tree. A fire burning in nearby refuse spread to the tree, igniting the tied youth's clothing. He was critically burned, and his older brother was seriously burned in his frantic efforts to release the younger brother. . . . Winchester, Mass., firemen spent over an hour of anxiety pleading with a 34-year-old disabled veteran perched atop a 150-foot water tank not to jump, before they, with the aid of policemen and a priest, were able to talk him down. . . , Fire fighters at North Haven, Conn., abruptly deserted the scene of a grass fire on March 16 while it still was burning. They came back and finished the job, though—but not until after the disappearance of the skunk that interrupted their work. Our thanks to Tom Magner.

LEONARD ROTARY GEAR PUMP

A new, better, APPARATUS PUMP!

Both pleased! City of Los Angeles using 10—County of Los Angeles using 7 units . . . Pump delivers 150 GPM at 150 lbs. . . . Specify—LEONARD on new trucks. Write for data.

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WHY *Janesville* IS FIRST

IT'S CUSTOM-BUILT!

Yes, the Janesville turn out suits are custom-built! Janesville offers you the convenience and comfort of sleeve and coat lengths tailored to fit *your* measurements!

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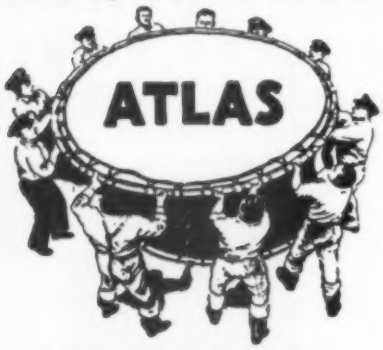

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in use in thousands of departments—time tried and proven—as the best and fastest means of rescue. All drop-forged hinges, with spring recoil mechanism like that on modern artillery. Specify ATLAS LIFE NETS on all new apparatus!

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27 WARREN ST., NEW YORK 7, N. Y.

With Our Readers

Down-Grading the Fire Service

To the Editor:

I have read through your editorial in the February issue of FIRE ENGINEERING concerning fire service down-graded.

I wish you to know I am in full accord with you concerning this editorial. For the life of me, I cannot understand this action. As you know, I spent twelve years of my life in the Roanoke Fire Department and have served for twenty-seven years as Captain of the Roanoke Life Saving Crew and now am serving as Chief of Rescue for the Civil Defense Division of the Roanoke unit. In analyzing this situation, I am in thorough accord with you concerning the possibilities of federal civil defense in fire division. It may be that you know much more about the situation than you have placed in writing. However, I feel as though the condition is serious and my purpose in this letter to you is to let you know that I am in full accord with your thoughts in connection with the situation throughout the country. I have been to the school in Olney and know many of the federal officers well and even after the most simple survey of facts, I am at loss to understand the situation.

Do you know of any way in which we fellows who have been interested in the national movement can be of assistance. If so, please advise me and I will be more than happy to assist in any capacity. Assuring you of my support and with kind regards, I am,

Sincerely yours,
JULIAN S. WISE,
Director of Rescue,
Roanoke, Virginia.

Roanoke, Va.,
Mar. 11, 1954.

To the Editor:

Your editorial in the February issue of FIRE ENGINEERING was most interesting to me for two reasons. First, as an old-time "buff" and subscriber of yours, I am a constant admirer and student of the Fire Service. Second, I am the volunteer Chief of the Rescue and First Aid Service of the San Francisco Disaster Council and Corps, which is our name for Civil Defense.

When we went about setting up our organization again, about four years ago, we at first attempted to follow the Federal pattern, but soon decided we would do better if we would group the field functions of the Medical and Health Division, together with the so-called "light rescue" functions of the Engineering Division. This was partly because Mobile First Aid Stations and Rescue Squads would both need certain auxiliary services of communications, transportation, survey, personnel and supply, which could be grouped in District Stations, and also because, dealing with casualties in the field, their operations should be closely related.

Also, neither the medical people or the engineering people (public works) had the facilities, aptitudes, or time to undertake the sales job of recruiting, or the organizational job of setting up the auxiliary services. The grouping of the rescue squad function and the casualty

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Through continuous research and in cooperation with fire and safety officials, we have perfected a dependable home fire alarm system. It is a great satisfaction to know that our efforts have been responsible for saving many lives in fires.

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McINTIRE GATE VALVES

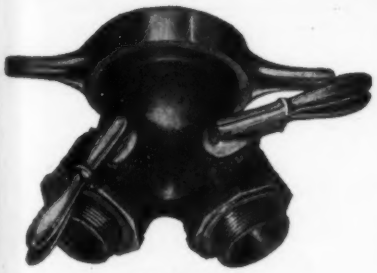

Fig. 164AN

4½" swivel female x two 2½" male Gated Siamese. Quick opening, ¼ turn valves.

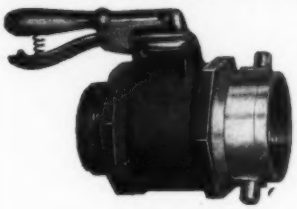

Fig. 163

Made either Right Hand or Left Hand 2½" male x female, gate valve.

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Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 8 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. No other drying method is so fast—so economical—so easy to use.

Circul-Air Dryers have passed the Approvals Tests and are listed by the Underwriter's Laboratories, Inc., Chicago and the Canadian Standards Association.

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gathering function has proven to be satisfactory to all concerned.

No one knows more about rescue than does the Fire Service, and our Rescue School is conducted for us by an officer and a member of the San Francisco Fire Department, with which fine organization our relationships are most cordial. Likewise, much of the training of our medical auxiliary personnel is done by stewards of our efficient municipal Emergency Hospital Service. After all, the Rescue and First Aid Service is essentially an auxiliary disaster supplementation of these two municipal services, so why shouldn't we get along?

It is unfortunate that at the Federal level, these relationships—Fire, Rescue, and Field Medical, are not grouped more closely, as then, at least from where I sit, we would receive better guidance.

Please don't get the impression that everything is rosy—our recruiting efforts (about which we receive little or no help from the Federal level) are productive of very meager results. However, we do have the nucleus (a good word in this atomic age) of an organization for our fourteen District Stations of the Rescue and First Aid Service, plus an Emergency corps ready to function on short notice.

In addition, due to the fine leadership at the State level, together with the cooperation of our State Legislature and local legislators, we have acquired through the FCDA matching funds program, nineteen sets of rescue equipment at $3,500 each, ninety-one sets of mobile first-aid station supplies, and equipment at $6,000 each, and fourteen sets of casualty station property at $4,000 each.

I maintain that rescue and first-aid functions should be related, and regret that the program as worked out has resulted in such a disparity in numbers between rescue squads and first-aid stations. Constructive comment from technical journals such as FIRE ENGINEERING should help.

Yours very truly,
THOMAS LARKE, JR.

San Francisco, Cal.,
Feb. 25, 1954.

To the Editor:

May I take this opportunity to commend you on your article on page 123 of the February FIRE EGINEERING. It is not only very plain what you mean, but I think it is a wonderful thing for the fire service. Editorials such as this do a great deal of good.

Will you please extend my thanks to Mr. Case for his courtesy and helpful treatment that he gave me during my stay in New York during the Directors' meeting?

With best personal wishes for your continued success,

Sincerely yours,
S. H. EDMONDSON,
Chief.

Pasadena, Calif.,
Mar. 5, 1954.

Shortest "Stretch" on Record!

Volunteer firemen at Brantford, Conn., hopped out of their beds at an early hour on March 14 when the fire horn sounded. They got to Fire Headquarters, drove out the fire apparatus, turned it around and turned on the hose. The blaze, which did $5,000 worth of damage, was on the second floor of the Fire Headquarters building.

Thanks TOM MAGNER

ACME . . . *the only Gas Mask with the* "PICTURE WINDOWS"

You never have that "jammed-in" feeling, wearing the Acme Full-vision Gas Mask. Its patented, larger lenses are like picture windows, giving you full natural vision for that safe, unconfined feeling. When you walk you can actually see your toes without bobbing your head. This factor alone makes Acme outstanding among gas masks . . . well worth looking into.

Write for the complete story on Acme Gas Masks for all fire fighting hazards.

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Because-

Your cap is the most distinctive part of your uniform, be sure to specify the best.

Ask your dealer to supply BRUNSSEN'S Helmet Brand Firemen Caps or write to us direct.

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Manufacturers of Uniform Headwear for Hard Wear

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Rate $8 per inch less 10% for three or more consecutive insertions.

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1½"x50' SJ CRL fire hose, unused but soiled	$ .26 ft. cpld.
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1½"x50' SJ CRL fire hose	$ .40 ft. cpld.
2½"x50' SJ CRL fire hose	.64 ft. cpld.
2½"x10' Hard suction hose	14.50 lgth cpld.
1"x50' Booster hose	.30 ft. cpld.
4"x16' DJ soft suction hose w/4½" spins long handle females	16.50 lgth. cpld.
1½" Suction hose	.75 ft. cpld.
1½"x50' Rubber covered water hose	.50 ft. cpld.
2½"x50' Rubber covered water hose	.90 ft. cpld.
1½"x25' Rubber covered water hose	10.00 lgth. cpld.
Wrecking bars, steel, heavy duty	2.50 ea.
Mechanical foam playpipes, Phomaire (Leading Manufacturer) (Cost $50.00 each)	8.50 ea.
2½" Nozzle holders	.95 ea.

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Baltimore 4, Md.
Phone VAlley 3-1672

WANTED

The Township of Wyoming, Kent County, Michigan is desirous of hiring a full time Fire Chief. At present the township is protected by a volunteer unit consisting of four departments of fifteen men each. These men are paid on a fee per call basis.

The intent of the township is to hire a man to coordinate these departments and have general supervision over them. He will also direct the operations at all fires. In addition he will maintain a constant plan of training.

The township has a central dispatch system and direct contact with all departments by two-way radio. Each department has ten monitors to receive the fire calls from the dispatcher. In addition, each department has one unit equipped with a two-way radio.

The township has nine pieces of equipment which includes three class "A" pumpers and a fourth scheduled for delivery this summer. They are housed in four good-sized fire stations.

All applicants for this position must direct inquiries to the Clerk listed below. Applicants must state age, experience, health, salary expected and include several references both as to character and experience.

HERMAN DeZWAAN, Clerk
1155 28th Street, S.W.
Grand Rapids 9, Michigan

MANUFACTURERS REPRESENTATIVES ATTENTION:

Nationally known Company, 60 years old, is about to make available to municipal, private and military fire fighting companies, a completely new and hitherto unknown fire fighting tool.

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This is a new division for this Company, so all territories are open at the date of this advertisement. Commissions will be liberal and territories controlled and protected.

Send full information on self, giving qualifications and experience, including lines and territories now traveled. Address: Box 110, Fire Engineering, 24 West 40th St., New York 18, N. Y.

2 SQUAD CARS and 2 FIRE TRUCKS FOR SALE

1932 Pierce-Arrow Squad Car. Canopy removable top—Very good condition..	$ 500.00
1938 Stewart Emergency Truck with new Canopy Top—New 500 GPM front mounted Pump—New 200 gallon Tank, Booster Hose and Booster Reel.....	2500.00
We have a few pairs of Hood knee length rite boots with heavy soles, felt lining and reinforced shanks—while they last.....	8.00
We have 175 1½" Hose Coupling Expanders, new and never used. Going at	20.00

Wire or write W. J. Lawless, 207 W. 3rd St., Elmira, for complete specifications or come to Elmira for demonstration.

W. J. LAWLESS
207 West 3rd Street
Elmira, N. Y.

FIRE APPARATUS SALESMEN

Nationally known apparatus manufacturer has territories available in Mid-West and South. Write at once giving qualifications and experience. Box 100, c/o Fire Engineering, 24 West 40th St., New York 18, New York.

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1/2 the Cost
1/6 the Weight

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A Top Brand Name We Cannot Advertise. Fresh, Current Date. Absolutely Clean, Perfect and Full Test. Sold on a Money-Back Guarantee. In Original Cartons. Brass Pin-Lug Couplings Applied in Any Specified Threading.

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BLACK RUBBER and TURNOUT COATS FACTORY REPAIRED
TORN BOOT TOPS REPLACED,
—15 inches up from center seam, $4.25 pair.
SAVE MONEY. ALL WORK GUARANTEED.
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Money for your organization. Easy to raise $200.00 to $1,000.00 with our Birthday Calendar fund raising plan. Write for details. Fred R. Clark, Room 46, Wilt Bldg., Elkins 1, West Virginia.

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1942 FORD
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Authentic Early American Fire Apparatus reproduced on 5½" round white china ashtrays, 8 designs featuring old favorite HAND & HORSE drawn apparatus—$1.50 ea. post paid. Quantity prices on request.

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$ .45 FOOT CPLD.

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Phone VAlley 3-1672

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WHY break your neck stumbling in the dark when this light is so convenient to use and yet shines undimmed for 8 hours.

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HOWLAND PLACE
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Book Shelf

NFPA Handbook of Fire Protection (Crosby-Fiske-Forster). 11th Edition. Edited by Robert S. Moulton. National Fire Protection Association, 60 Batterymarch St., Boston 10, Massachusetts. 1656 pp. 5 x 7½ in. Price $10.50

The 11th Edition of the NFPA Handbook of Fire Protection (Crosby-Fiske-Forster) presents in compact form, for ready reference, the essential information on fire prevention and protection that time has crystallized into good practice. It covers both life safety from fire and the protection of property. The Handbook is the only reference volume of its kind available today. It represents two-years' work on the part of the National Fire Protection Association staff with the assistance of more than 100 expert consultants.

In its 58th year of publication, the Handbook is useful alike to experienced fire protection engineers, who use it constantly as a reference volume, to architects, to students of fire prevention and protection, to inspectors and to property owners who are anxious to secure the latest fire protection engineering information available.

The 11th edition of the NFPA Handbook of Fire Protection has been completely revised from the 10th edition published in 1948. It has hundreds of illustrations; plan symbols are reproduced in full color. Some 11,000 separate items are conveniently indexed. It is set in easy-to-read type and bound in flexible red fabricoid. The 11th edition covers many new features not found in the previous edition. There is a complete state by state summary of fire laws with information as to the subject matter covered and the enforcing agency. Similar information is also given for the Canadian provinces.

Automatic spray sprinklers, developed since the last edition, are fully described and illustrated. New dry pipe valves, water flow alarms and other automatic sprinkler devices are illustrated with diagrams showing construction and method of operation.

The chapter on Water Spray, completely rewritten, contains complete tables of discharge characteristics of each brand and model of spray (fog) nozzle.

The tables of flammable liquids and hazardous chemicals have been completely revised to include new chemicals as additional data has become available during the past five years; 496 changes and additions in tables of fire hazard properties, extinguishing methods, etc.

Interior finish materials, including various types of wallboard and other materials, are covered in detail with information as to flame spread characteristics and suitability for various uses. The latest information is presented on fire retardant treatments for wood, textiles and Christmas trees.

The latest edition of the Handbook contains extensive new tables on fire resistance ratings of walls, floors, roofs and columns as well as the most recent data on various building construction types.

New tables of fire hazard properties of plastics are offered with detailed information on each presented by trade name.

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CUSTOM-BUILT FIRE ENGINE

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Plate X-329

MADE OF BRASS ALLOY
NON-CORROSIVE

Here is the real practical answer to the Fire Chief's challenge for lighter weight with greater strength. The metal used in Elkhart's X-TRUDE coupling is a special non-corrosive Brass alloy. Processed by extrusion, instead of casting, gives more strength and insures greater accuracy in machining. *Elkhart's X-TRUDE coupling—as light as aluminum—but made of brass . . . half the weight and twice the strength of brass couplings in service today.*

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FIRE ENGINEERING

APRIL, 1954

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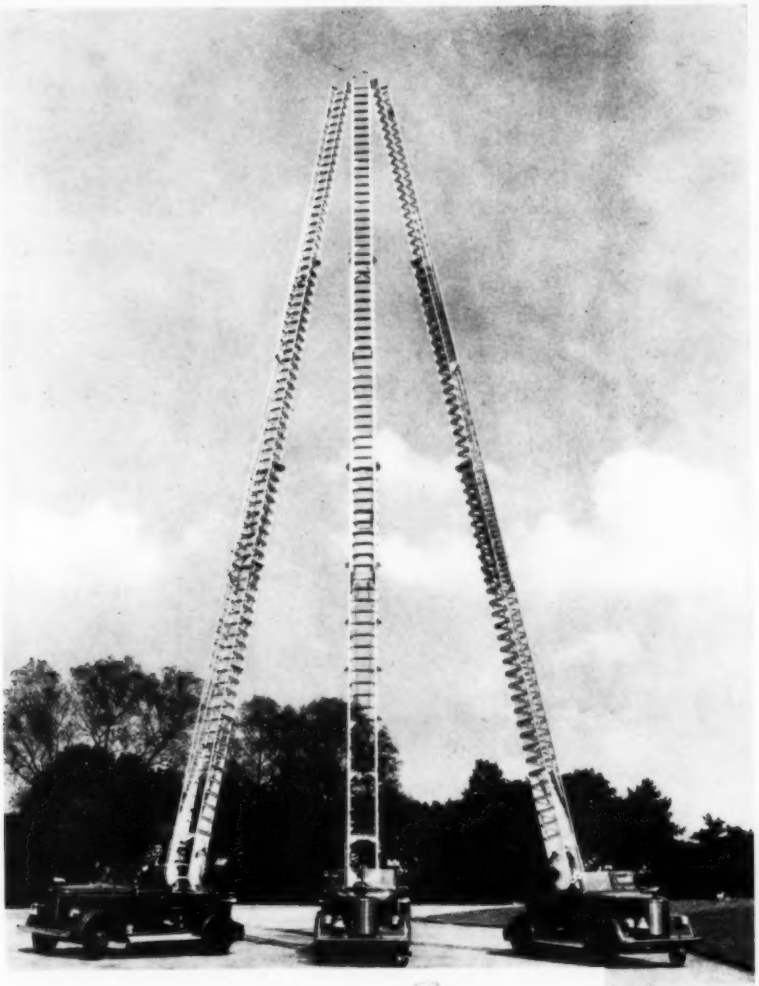

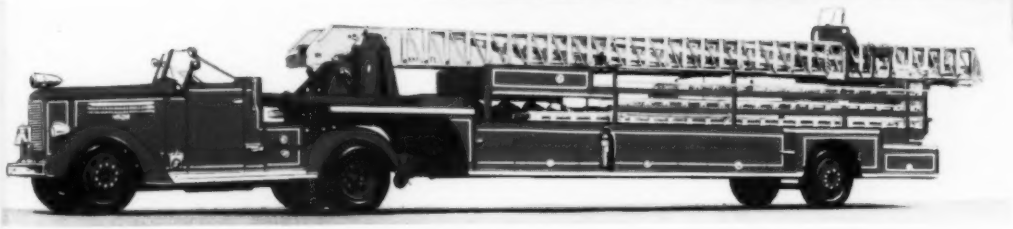

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Dependable, strong, efficient aerial ladders are needed to handle elevated fire streams and rescue operations when lives and property are at stake. The Pirsch aluminum alloy aerial ladder powered by the Pirsch Hydro-Mechanical Aerial Hoist gives you all these features and more. If you are buying an aerial ladder truck get the facts about Pirsch aerials.

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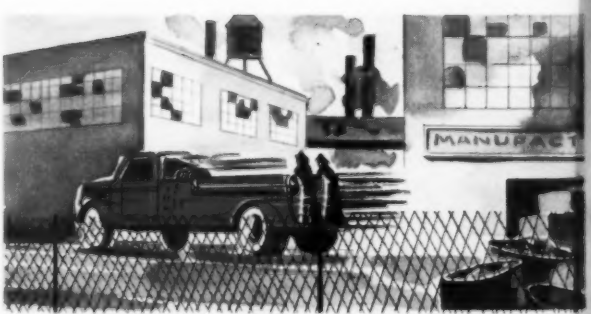

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